

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: July 13, 2004, 16:03:45 ; Search time 50 seconds
(without alignments)
5215.273 Million cell updates/sec

Title: US-09-297-703C-29
Perfect score: 4545
Sequence: 1 MGHYISGIRFPACPLCKSQ.....AVVYALVEDEVNELEFPVAG 836

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1279676 seqs, 311918243 residues

Total number of hits satisfying chosen parameters: 1279676

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:*

- 1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
- 2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep.*
- 5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep.*
- 7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
- 9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep.*
- 10: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep.*
- 11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep.*
- 12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
- 13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
- 14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
- 15: /cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep.*
- 16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
- 17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep.*
- 18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	3501.5	77.0	870	12	US-10-424-599-273691
2	3387.5	74.5	882	14	US-10-254-534-2
3	3356	73.8	878	14	US-10-056-454A-15
4	3315	72.9	841	16	US-10-437-963-154157
5	3281.5	71.8	814	14	US-10-171-008-10
6	3176	69.9	825	16	US-10-437-963-114379
7	3170	69.7	855	9	US-09-792-127-4
8	3166.5	69.7	798	12	US-10-336-753-70
9	3166.5	69.7	870	12	US-10-336-753-54
10	3152.5	69.4	829	9	US-09-792-127-5
11	3148	69.3	695	9	US-09-792-127-2
12	2204	48.5	464	14	US-10-254-534-4
13	2124	46.7	776	12	US-10-336-753-56
14	2124	46.7	822	14	US-10-171-008-9
15	2119	46.6	827	16	US-10-437-963-170346

16	1953	43.0	674	12	US-10-425-114-53683	Sequence 53683, A
17	1939.5	42.7	421	12	US-10-425-114-45676	Sequence 45676, A
18	1885	41.5	681	15	US-10-369-493-5706	Sequence 5706, A
19	1863.5	41.0	874	15	US-10-369-493-3969	Sequence 3969, A
20	1765.5	38.8	704	15	US-10-369-493-1720	Sequence 1720, A
21	1664.5	36.6	546	14	US-10-171-008-8	Sequence 8, Appli
22	1634.5	36.0	647	15	US-10-369-493-10283	Sequence 10283, A
23	1376	30.3	309	14	US-10-171-008-4	Sequence 4, Appli
24	1034.5	22.8	502	16	US-10-437-963-138237	Sequence 138237,
25	822	18.1	337	12	US-10-262-511-108	Sequence 108, App
26	789	17.4	474	16	US-10-437-963-154156	Sequence 154156,
27	740.5	16.3	726	12	US-10-424-599-283934	Sequence 283934,
28	594	13.1	726	15	US-10-369-493-19590	Sequence 19590, A
29	587.5	12.9	756	15	US-10-369-493-20951	Sequence 20951, A
30	587	12.9	750	15	US-10-369-493-19848	Sequence 19848, A
31	587	12.9	770	15	US-10-369-493-2780	Sequence 2780, Ap
32	576	12.7	762	16	US-10-705-195-2	Sequence 2, Appli
33	571.5	12.6	630	15	US-10-369-493-50	Sequence 50, Appl
34	571.5	12.6	728	15	US-10-369-493-23588	Sequence 23588, A
35	571.5	12.6	785	12	US-10-336-753-36	Sequence 36, Appl
36	571	12.6	737	15	US-10-369-493-12299	Sequence 12299, A
37	566.5	12.5	720	15	US-10-369-493-20849	Sequence 20849, A
38	566.5	12.5	735	15	US-10-369-493-19307	Sequence 19307, A
39	566	12.5	617	15	US-10-369-493-9891	Sequence 9891, Ap
40	566	12.5	730	12	US-10-282-122A-58499	Sequence 58499, A
41	556	12.2	159	12	US-10-424-599-230110	Sequence 230110,
42	550.5	12.1	731	9	US-09-738-626-4854	Sequence 4854, Ap
43	550	12.1	705	15	US-10-369-493-632	Sequence 632, App
44	549.5	12.1	719	15	US-10-369-493-10019	Sequence 10019, A
45	544	12.0	628	15	US-10-369-493-9028	Sequence 9028, Ap

ALIGNMENTS

RESULT 1

US-10-424-599-273691
; Sequence 273691, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 273691
; LENGTH: 870
; TYPE: PRT
; ORGANISM: Glycine max
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(870)
; OTHER INFORMATION: unsure at all Xaa locations
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_89164C.1.pep
US-10-424-599-273691

Query Match	77.0%	Score	3501.5	DB 12	Length	870
Best Local Similarity	75.5%	Pred. No. 0				
Matches	649	Conservative	73	Mismatches	103	Indels 35; Gaps 6
Qy	4	YTISGIRFPACPLCKSQSTGFHGYRTSSCLSFNFKAFRRVFSKGSHESDSNMVMT	63			
Db	3	YTISGIRFPVLP--SLHNSRFRGDRRTASLPVLRNNSFSRKTALKKSHSDSLSSAIA	60			
Qy	64	ASKRVLPDGRICRYCSSTQLEAPGVTVESQVLTVESLIMDD-----KIV	110			
Db	61	KSDKVLIPQDQNSASLITQLETPDITSETDQ---NLEDLTMEDEOKYNISEAASSYRHI	117			

```
QY 111 ED-----EWN-----KESVPMRETVSIRKIGSKPSIRPGRGQRIYDIDPSLTGPF 156
D 118 EDGGSVSVSLVDVNIIPAKKASVSVGSKSIKIVSDEVPKPIPPPGTGQKQIYEIDPSLUAH 177
QY 157 RQHLDRYSQYKRLREEDIDYEGSLDAFSGYKFKGFSRSETGITYREWAPGATWAALIG 216
D 178 RDHLDFRYGQYKRLCYEIDKHEGLDTFSRGYKFKGFSRSETGITYREWAPGAKSAALIG 237
QY 217 DFNWNPADVMQNECGVWEIFLPPNADGSPPIPHGSRVKIRMDPTSGNKSIPAWIKF 276
D 238 DFNWNPADVMTRNEFVWEIFLPPNVDGSPPIPHGSRVKIRMDPTSGIKDSIPAWIKF 297
QY 277 SVQAPGELPYNGIYDPEPEEKVYFKNPQPKPSLRIYESHVGMSTEVINTYANFRD 336
D 298 SVQAPGIPYNGIYDPEPEEKVYFKNPQPKPSLRIYESHVGMSTEVINTYANFRD 357
QY 337 DVLPRIKLGYNAVQIMAIQHSYASFGYHVTNFYAAASRRFGTDDLSLIDKAHELGL 396
D 358 DVLPRIKLGYNAVQIMAIQHSYASFGYHVTNFYAAASRRFGTDDLSLIDKAHELGL 417
QY 397 LVLMDIVHSHASTNTLDGLNMFDTGCHYFHSRGRHWWDRSLFNYGSEWELRFLSN 456
D 418 LVLMDIVHSHASTNTLDGLNMFDTGCHYFHSRGRHWWDRSLFNYGSEWELRFLSN 477
QY 457 ARWLDYKDFGRFDCGVTSMYTHHGLQVDFTCNYYNEFYGATDVDAVYVLLMDMIH 516
D 478 ARWLDYKDFGRFDCGVTSMYTHHGLQVDFTCNYYNEFYGATDVDAVYVLLMDMIH 537
QY 517 GLFPEAVTIGEDVSGMPTCIPVEDGGVGFDFYRLHMAVADKWVEIIOQRDEDKMGDVIH 576
D 538 GLFPEAVTIGEDVSGMPTCIPVEDGGVGFDFYRLHMAVADKWVEIIOQRDEDKMGDVIH 597
QY 577 MLTNRWLEKCVSAESHDAQALVGDXTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHQM 636
D 598 TLTNRWLEKCVSAESHDAQALVGDXTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHQM 657
QY 637 IRLITMGLGEGYLNFNMGNEFHPWIDFPRGDLHLPSGKFPVGNNSYDKCRRRFDLGN 696
D 658 IRLITMGLGEGYLNFNMGNEFHPWIDFPRGDLHLPSGKFPVGNNSYDKCRRRFDLGN 717
QY 697 SKHLRYHGMQFDDQAIQHLBEAYGFTSEHQYISRRKDERDRIIVFERGNLVPFNPHWTS 756
D 718 ADYLRYHGMQFDDQAIQHLBEAYGFTSEHQYISRRKDERDRIIVFERGNLVPFNPHWTS 777
QY 757 SYSYRVGCLKPGYKIVLSDDDPLFGGPRGLSHDAEHFEGWYDNRPSFWYTPCRT 816
D 778 SYSYRVGCLKPGYKIVLSDDDPLFGGPRGLSHDAEHFEGWYDNRPSFWYTPCRT 837
QY 817 AVVYAL---VEDEVENELEP 833
D 838 AVVYALADDEPTLADEAP 857
```

RESULT 2

```
US-10-254-534-2
; Sequence 2, Application US/10254534
; Publication No. US20030046730A1
; GENERAL INFORMATION:
; APPLICANT: EK, BO
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/10/254.534
; CURRENT FILING DATE: 2002-09-26
; PRIOR APPLICATION NUMBER: US/09/087,277
; PRIOR FILING DATE: 1998-05-29
; PRIOR APPLICATION NUMBER: PCT/SE96/01558
; PRIOR FILING DATE: 1996-11-28
; PRIOR APPLICATION NUMBER: SE 9504272-7
```

```
; PRIOR FILING DATE: 1995-11-29
; PRIOR APPLICATION NUMBER: SE 9601506-0
; PRIOR FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 2
; LENGTH: 878
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:beII gene (branching enzyme II) fr
; US-10-254-534-2
```

```
Query Match 74.5%; Score 3387.5; DB 14; Length 878;
Best Local Similarity 71.9%; Pred. No. 9.1e-315;
Matches 621; Conservative 92; Mismatches 116; Indels 35; Gaps 5;

QY 4 YTISGIRFPAP-LCKSQSTGFHGYRRTSSCLSNFKEAFSRVFSFGKSHSHSDSNVMV 62
D 3 YTLGVRFPVPSVYKSNFSSNGDRRNANKSVFLKKHLSRLKILAEKSSYNSESRPSTV 62
QY 63 TASKRVL-PDGRIECVSSSTDQLEAPCTVSEESQVLTVDVESLIMDD---KIVEDEV--- 114
D 63 AASGKVLVPGTQSDSSSTDDQEFETETSPENSPASTDVSSTMEHARQIKTENDDVPS 122
QY 115 ----NKESVPMRETVSIRKIGS-----KPSRIPPPGGRGQRIYD 148
D 123 SLDTSVEELDPASSLQLOEGKLBESKTLNTSEETIIDESDRIRERGIPTGCLGQIYE 182
QY 149 IDPSLTGFRHLDYRYSQYKRLREEDIDYEGSLDAFSGYKFKGFSRSETGITYREWAP 208
D 183 IDPLLTNYRQHLDRYSQYKRLREEDIDYEGSLDAFSGYKFKGFSRSETGITYREWAP 242
QY 209 ATWAALIGDFNWNPNADVMQNECGVWEIFLPPNADGSPPIPHGSRVKIRMDTPSGND 268
D 243 AOSAAALIGDFNWNPNADVMQNECGVWEIFLPPNADGSPPIPHGSRVKIRMDTPSGND 302
QY 269 SIPAWIKFSGVQAPGELPYNGIYDPEPEEKVYFKNPQPKPSLRIYESHVGMSTSEPV 328
D 303 SIPAWIKFSGVQAPGELPYNGIYDPEPEEKVYFKNPQPKPSLRIYESHVGMSTSEPV 362
QY 329 NTYANFRDVLPRIKLGYNAVQIMAIQHSYASFGYHVTNFYAAASRRFGTDDLSLID 388
D 363 NSYVNRDEVLPRIKLGYNAVQIMAIQHSYASFGYHVTNFYAAASRRFGTDDLSLID 422
QY 389 DKAHELGLLVLMDIVHSHASTNTLDGLNMFDTGCHYFHSRGRHWWDRSLFNYGSEW 448
D 423 DKAHELGLLVLMDIVHSHASTNTLDGLNMFDTGCHYFHSRGRHWWDRSLFNYGSEW 482
QY 449 VLRFLLSNARWMLDEYKDFGRFDCGVTSMYTHHGLQVDFTCNYYNEFYGATDVDAVYL 508
D 483 VLRFLLSNARWMLDEYKDFGRFDCGVTSMYTHHGLQVDFTCNYYNEFYGATDVDAVYL 542
QY 509 MLNDMIHGLFPEAVTIGEDVSGMPTCIPVEDGGVGFDFYRLHMAVADKWVEIIOQRDED 568
D 543 MLVNDLIHGLFPEAVTIGEDVSGMPTCIPVEDGGVGFDFYRLHMAVADKWVEIIOQRDED 602
QY 569 WKMGDIIVHMLTNRWLEKCVSAESHDAQALVGDXTIAFWLMDKMDYDFMALDRPSTPLID 628
D 603 WRVGDIVHTLTNRWLEKCVSAESHDAQALVGDXTIAFWLMDKMDYDFMALDRPSTPLID 662
QY 629 RGVALHKMIRLITMGLGEGYLNFNMGNEFHPWIDFPRGDLHLPSGKFPVGNNSYDKC 688
D 663 RGVALHKMIRLITMGLGEGYLNFNMGNEFHPWIDFPRGDLHLPSGKFPVGNNSYDKC 722
QY 689 RRRFDLGNKHLRYHGMQFDDQAIQHLBEAYGFTSEHQYISRRKDERDRIIVFERGNLVP 748
D 723 RRRFDLGNKHLRYHGMQFDDQAIQHLBEAYGFTSEHQYISRRKDERDRIIVFERGNLVP 782
QY 749 VFNFWHTSSYSYRVGCLKPGYKIVLSDDDPLFGGPRGLSHDAEHFEGWYDNRPSF 808
D 783 VFNFWHTSSYSYRVGCLKPGYKIVLSDDDPLFGGPRGLSHDAEHFEGWYDNRPSF 842
```

Qy 809 MYVTPCRTAVVYALVDEVEENELE 832
Db 843 MYVAPSRRTAVVYALVDKEEBEEE 866

RESULT 3
US-10-056-454A-15
; Sequence 15, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Uniqema Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/056,454A
; FILING DATE: 25-Jun-2002
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 882 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 15:

US-10-056-454A-15

Query Match 73.8%; Score 3356; DB 14; Length 882;
Best Local Similarity 70.9%; Pred. No. 9,6e-312;
Matches 617; Conservative 96; Mismatches 119; Indels 38; Gaps 6;

Qy 4 YTGIRPPCAP-LCKSQSTQFGHYRTSSCLSNFKFAFRVFSFGKSSHESDSNNVMV 62
Db 3 YTLGVRPFTVPVYKSNFGSNGDRNANVSFLKHSRLKILAEKSYNSFRPSTV 62

Qy 63 TASKRVL-PDGRICYSSTQLEAPGVTSQVLTDESIMDD-----KIVDEV--- 114
Db 63 AASKGLVPGTQSDSSSSSTQFETETSPENSPASTDVSSTMEHASQIKTENDDDVEPS 122

Qy 115 -----NKESVPMRETVSIRKIGS-----KPRSIPPPGRGQRIYD 148
Db 123 SDLTGSVELODFASSLQLOEGKLEESKTLNTSBETIIDESPRNERGIPPPGLGQIYE 182

Qy 149 IDPSLTGFRHLDVRYQYKRLREIDKYEGSLDAFSRGYKFGFSRSETGITYREWAPG 208
Db 183 IDPLLTNYRQHLDRYSQYKRLREIDKYEGSLDAFSRGYKFGFSRSETGITYREWALG 242

Qy 209 ATWAALIGDFNNWPNADVMTQNECGVWEIIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
Db 243 AQSAALIGDFNNWPNADVMTQNECGVWEIIFLPNNVDSGSPAIPIHGSRVKIRMDTPSGVKD 302

Qy 269 SIPAWIKESVQAPGLPYNIGYDPEEEKVYFKNPOKPKSLRIYESHVGMGSTPVI 328
Db 303 SIPAWINSLQLPDEIPNGIHYDPEEREIFQHPKPKSLRIYESHVGMGSTPVI 362

Qy 329 NYANFRDDVLPRIKKLGYNVQLMAIQEHSYASFGYHVTNIFYAASRFGTDDLSLI 388
Db 363 NSYNFRDEVLPRIKLGYNALQIMAIQEHSYASFGYHVTNIFYAASRFGTDDLSLI 422

Qy 389 DKAHELGLLVLMDIVHSHASNTLDGLNMFQGTGCHYFHSGRHHNWDRLNYSWE 448
Db 423 DKAHELGTIVLMDIVHSHASNTLDGLNMFQGTGCHYFHSGRHHNWDRLNYSWE 482

Qy 449 VLRELLSNARWLLDEYKFDGFRFDGVTSMYTHHGLQVDFGTGNYNEFYGVATDVAVYL 508
Db 483 VLRYLLSNARWLLDAFKFDGFRFDGVTSMYTHHGLSVGFTGNYEYFGLATDVAVYL 542

Qy 509 MLNDMIHGLPPEAVTIGEDVSGMPTVCIPVEDGCGVDFYRLHMAVADKWVEIIQKDED 568
Db 543 MLVNDLIHGLPDAITIGEDVSGMPTFCIPVQEGGVDFYRLHMAIADKRIELKQKDED 602

Qy 569 WKMGDIHMLTNRWLEKCVSYAESHDQALVGDXTIAFWLMDKMDYDFMALDRPSTPLID 628
Db 603 WRVGDIVHTLTNRWSEKCVSYAESHDQALVGDXTIAFWLMDKMDYDFMALDRPSTSLID 662

Qy 629 RGVALHQMIRLITMGLGEGYLFNFMGNEFGHPWIDFPRGDLHLPSGKFVFGNNYSYDKC 688
Db 663 RGIALHQMIRLITMGLGEGYLFNFMGNEFGHPWIDFPRAEQHLSDGSIPIGNOFQSYDKC 722

Qy 689 RRRPDLGNSKILRYHGMQEDQALQHLBEAYGFWTSEHYSIRKDEDRRIIVFERGNLVF 748
Db 723 RRRPDLGDAEYLYRGLQEFDRPMOYLEDKYEFWTSBHQFTSRKDEGDMIVFEKGNLVF 782

Qy 749 VFNHMTSSYSDYRVGCLKPGYKI VLDSDDPLPGFGFGRSLSHDAEHFSFEGWYDNRPRSF 808
Db 783 VFNHMTKSYSDYRIACLKPGYKVALDSDDPLPGFGFGRIDHNAEYTFEGWYDNRPRSI 842

Qy 809 MYVTPCRTAVVYALV---EDEVENELEPVA 835
Db 843 MYVAPCTAVVYALVDKEEBEEEVEVA 872

RESULT 4
US-10-437-963-154157
; Sequence 154157, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; APPLICANT: Wu, Wei
; APPLICANT: Boukharov, Andrey A.
; APPLICANT: Barbazuk, Brad
; APPLICANT: Li, Ping
; TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated with
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53221)B
; CURRENT APPLICATION NUMBER: US/10/437,963
; CURRENT FILING DATE: 2003-05-14
; NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 154157
; LENGTH: 841
; TYPE: PRT
; ORGANISM: Oryza sativa
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT4530_54044C.1.pep
US-10-437-963-154157

Query Match 72.9%; Score 3315; DB 16; Length 841;
Best Local Similarity 74.9%; Pred. No. 7.6e-308;
Matches 611; Conservative 66; Mismatches 99; Indels 40; Gaps 6;

Qy 36 FNFKEAFSRVFS-----GK-----SSHESDSSNNVMVTASKRVLPGDGRICYS 78
Db 40 FRRKDSFSRGVSCAGAPGKVLVPGGSGDDLSSAEPDVTQEQPEESQIPDDNKVKPFE 99

Qy 79 SSTDLQLEAPGTVS-----BESQVLTDESIMDDKIVEDWVKESVPMRTVTSIRK 129
Db 100 EE-BEIPAVAEASIKVVAEDKLESSEVIQDIE-----ENVTEGVKDADEPTVS----- 147

Qy 130 IGSKPRSI PPPGRGQRIYDIPSLTGRQHLDRYSQYKRLREIDKYEGSLDAFSRGYE 189
Db 148 --DKPRVIPPGGQKIQIDPMLGEPNHLDRYSYKRMRAAIDQHEGLDAFSRGYE 205

Qy 190 KFGFSRSETGITYREWAPGATWAALIGDFNNWPNADVMTQNECGVWEIIFLPNNADGSP 249

; NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 114379
; LENGTH: 825
; TYPE: PRF
; ORGANISM: Oryza sativa
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT4530_18076C.1.pép
US-10-437-963-114379

Query Match 69.9%; Score 3176; DB 16; Length 825;
Best Local Similarity 70.3%; Pred. No. 1.5e-294;
Matches 586; Conservative 86; Mismatches 117; Indels 44; Gaps 7;
Qy 9 IRFPACAPCKSQSTGFHGYRRTSCLSFNFKEAFRRVFGSKSHESDSSNMVMTAS--- 65
Db 20 VRFPV-----PAGARSWRAAEELPT--SRSLSGRRFFPGAVRVGGGGRVAVRAAGAS 70
Qy 66 -KRVLDPGRIB--CYSSSTDQLEAPGVSE-----ESQVLTDVESLIMDDKIVE 111
Db 71 GEVMIPEGESDMPVPSAGSDQLPALDDELSTEVGAETVESSGASDVEGV-----KRVV 126
Qy 112 DEVNKESVPMRETVSIRKIGSKPRSIIPPGRGORIYDIDPSLTGFROHLDVRYSOYKRLR 171
Db 127 EELAAE-----OKPRVVPPTGGQKIFQMSMLNGTKHLETRYSLYRLRL 172
Qy 172 BEIDKYEGLDAFSGRYEKFGRSRTSETGITTYREWAPGATWAALIGDFNNMNPADVMTON 231
Db 173 SDIDQYEGGLETSRGEYKFGFNHSAEGVTTYREWAPGAHSAALVGFNNMNPADRMKN 232
Qy 232 ECGWEIPLPNNADGSPPIPHGSRVKIRMDTPSGNKGOSIPAWIKFSVOAPGELPYNGIYY 291
Db 233 EFGWEIFPLPNNADGSSPIPHGSRVKIRMETPSGIGKDSIPAWIKYSVQAAGEIPIYNGIYY 292
Qy 292 DPPEEKVKFNKPPKPKSLRIYETHVGMSTSEPTVNTYANFRDDVLPRIKKLGNVAVQ 351
Db 293 DPPEEKYIFKHPQPKRPSKSLRIYETHVGMSTSEPKINTYANFRDEVLPRIKKLGNVAVQ 352
Qy 352 LMAIQEHSYYASFGYHVTNFYAASRFGTDDLSLIDKAHELGLLMDIVHSHASNT 411
Db 353 IMAIQEHAHYGSFGYHVTNFYAPSRFGTDDLSLIDKAHELGLVLMVMDVHSHASNT 412
Qy 412 LDGLNMPDGTGTHYFHSGPRGHMWDRLFNYSWEVLRLFNLSNARWLDEYKDFGRF 471
Db 413 LDGLNMPDGTGTHYFHSGSRGHHMWDRLFNYSWEVLRLFNLSNARWLDEYKDFGRF 472
Qy 472 DGVTSMTYTHGLQVDFGNYNEFGYATDVAVVYLLMLNDLMDIHLGLPEAVTIGEDVSG 531
Db 473 DGVTSMTYTHGLQVDFGNYSEYFGFATDADA VVYLLMLNDLMDIHLGLPEAVTIGEDVSG 532
Qy 532 MPTVCIPVEDGGVGFYRLHMAVADKWVEIIOKRDDEKMGDIIVHMLTNRRLWLEKCVSYA 591
Db 533 MPTFALPVQDGGVGFYRLHMAVADKWVEIIOKRDDEKMGDIIVHMLTNRRLWLEKCVSYA 592
Qy 592 ESHDQALVGDXTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHKMIRLITVGLGEGYLN 651
Db 593 ESHDQALVGDXTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHKMIRLITVGLGEGYLN 652
Qy 652 FMGNEFGHPWIDPRGDLHLPSGKFVPGNYSYDKCRRRDLGNSKHLRVHGMQEDQA 711
Db 653 FMGNEFGHPWIDPRGDLHLPSGKFVPGNYSYDKCRRRDLGNSKHLRVHGMQEDQA 712
Qy 712 IQHLEAAYGFTSBHOYISRKDERDRIIVFERGNLIVFVFNHFWTSSYSDYRVGCLKPGKY 771
Db 713 MQSLEEKYGFMTSDHOYISRKHEEDKMIIFKGGDLVFNFNHNSVFDYRVGCLKPGKY 772
Qy 772 KIVLDSDDLPGGGRSLSHAEHFSFEGYDNRPRSPMVTPTCTAVYALVE 824
Db 773 KIVLDSAGLFGGGRSLSHAEHFTACDCHDNRPYSFVSYPSPRTCVVYAPAE 825

RESULT 7
US-09-792-127-4
; Sequence 4, Application US/09792127

; Patent No. US20020002713A1
; GENERAL INFORMATION:
; APPLICANT: Allen, Steve
; APPLICANT: Beckles, Diane M.
; APPLICANT: Butler, Karla
; APPLICANT: Pearlstein, Rich
; TITLE OF INVENTION: Starch Branching Enzyme Iib
; FILE REFERENCE: BB1439 US NA
; CURRENT APPLICATION NUMBER: US/09/792,127
; CURRENT FILING DATE: 2001-02-23
; PRIOR APPLICATION NUMBER: 60/186098
; PRIOR FILING DATE: 2000-03-01
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 4
; LENGTH: 855
; TYPE: PRF
; ORGANISM: Triticum aestivum
US-09-792-127-4

Query Match 69.7%; Score 3170; DB 9; Length 855;
Best Local Similarity 70.9%; Pred. No. 6.1e-294;
Matches 592; Conservative 81; Mismatches 130; Indels 32; Gaps 8;
Qy 7 SGIRFPACAPCKSQSTGFHGYRRTSCLSF--NFKFAFSRRVFGSKSHE-----SDSS 58
Db 30 AGLARSPASGGAERRGRGVQLQSPSLFLFRNKGTRSPRAVGVGSGWRVVRAGGPGS 89
Qy 59 NVMVTASKRVLDPGRITCYSSSTDQLEAPGVSEESQVL---TDVESLMD---DKIVE 111
Db 90 EVMI-----PDGSGGTPPSID----GPVDFSDDLKVPFIDDETSQDGGEDSWS 137
Qy 112 DEVNK--ESVPMRETVSIRKIGS---KPRSIIPPGRGORIYDIDPSLTGFROHLDVRYSO 166
Db 138 SETNOVSEEDAEEDTSEMDKESSTREKLRLPLPPGNGQQIYEDPTLRDKYHLEYRSL 197
Qy 167 YKLRREIDKYEGSLDAPSGYKFGFSRSETGITTYREWAPGATWAALIGDFNNMNPAD 226
Db 198 YRIRSDIDSHGEGMDVFSRGYKFGFMRSAEGITTYREWAPGADSAALVGFNNWDPNAD 257
Qy 227 VMTQNECGWVEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKGDSIPAWIKFSVOAPGELPY 286
Db 258 HMSNKDILGWVEIFLPNNADGSPPIPHGSRVKIRMDTPSGIKDSIPAWIKFSVOPTGDIPI 317
Qy 287 NGIYDPPBEKVKVFNKPPKPSKSLRIYETHVGMSTSEPTVNTYANFRDDVLPRIKKL 346
Db 318 NGIYDPPBEKVKVFNKPPKPSKSLRIYETHVGMSTSEPKINTYANFRDEVLPRIKRLG 377
Qy 347 YNAVQLMALIOEHSYYASFGYHVTNFYAASRFGTDDLSLIDKAHELGLLMDIVHSH 406
Db 378 YNAVQLMALIOEHSYYGSFGYHVTNFYAPSRFGSPEDLSLIDRAHELGLVLMVMDVHSH 437
Qy 407 ASNTLIDGLNMPDGTGTHYFHSGPRGHMWDRLFNYSWEVLRLFNLSNARWLDEYK 466
Db 438 ASNTLIDGLNMPDGTGTHYFHSGSRGHHMWDRLFNYSWEVLRLFNLSNARWLDEYK 497
Qy 467 DGRFDCGVTSMYTHGLQVDFGNYNEFGYATDVAVVYLLMLNDLMDIHLGLPEAVTIG 526
Db 498 DGRFDCGVTSMYTHGLQVDFGNYNEFGYATDVAVVYLLMLNDLMDIHLGLPEAVTIG 557
Qy 527 EDVSGMPTVCIPVEDGGVGFYRLHMAVADKWVEIIOKRDDEKMGDIIVHMLTNRRLWLEK 586
Db 558 EDVSGMPTFALPVQVGGVGFYRLHMAVADKWVEIIOKRDDEKMGDIIVHMLTNRRLWLEK 617
Qy 587 CVSYAESHDQALVGDXTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHKMIRLITVGLG 646
Db 618 CVTYAESHDQALVGDXTIAFWLMDKMDYDFMALNGPSTPNIDRGIALHKMIRLITVGLG 677
Qy 647 EGYLNFMGNEFGHPWIDPRGDLHLPSGKFVPGNYSYDKCRRRDLGNSKHLRVHGMQ 706
Db 678 EGYLNFMGNEFGHPWIDPRGDLHLPSGKFVPGNYSYDKCRRRDLGNSKHLRVHGMQ 737
Qy 707 EFDQAIQHLEAAYGFTSBHOYISRKDERDRIIVFERGNLIVFVFNHFWTSSYSDYRVGCL 766

Db 388 GLNGFDGTDTHYFHSGPRGHHMMWDSRLFNFGNWEVLRFLLSNARWMLLEEKYKFDGFRD 447
Qy 474 VTSMMYTHHGLQVDTGNVNEFYGVATDVAVVYMLLNDMIHGLFPEAVTIGEDVSGMP 533
Db 448 VTSMMYTHHGLQVDTGNVNEFYGVATDVAVVYMLLNDMIHGLYFPEAVTIGEDVSGMP 507
Qy 534 TVCIPVEDGGVDFYRLHMAVADKWEI IQRDEDMKMDIVHMLTNRRLWLEKCVSYAES 593
Db 508 TFALPVHDGGVDFYRLHMAVADKWEI IQRDEDMKMDIVHMLTNRRLWLEKCVSYAES 567
Qy 594 HDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHMKMIRLITMGLGGEGYLNFM 653
Db 568 HDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHMKMIRLITMGLGGEGYLNFM 627
Qy 654 GNEFGHPWIDFPRGDLHLPSCGFVPGNNYSYDKCRRRFDLGNCKHLYHGMQDFDQAIQ 713
Db 628 GNEFGHPWIDFPRGDLHLPSCGFVPGNNYSYDKCRRRFDLGNCKHLYHGMQDFDQAIQ 687
Qy 714 HLEAYGFWTSEHQYISRKDERDRIIVFERGNLVFVFNFWHTSSYSYDYRVLGCKPGKYKI 773
Db 688 HLEQYEFWTSYHQYISRKDEEDKVIIVFEKGDVLFVFNFWHTSSYSYDYRVLGCKPGKYKI 747
Qy 774 VLSDDDPLFGGFRGLSHDAEHFSGEGYDNRPRSFVMTPTCRTAVVYA 824
Db 748 VLSDAGLFGGFRGLSHDAEHFSGEGYDNRPRSFVMTPTCRTAVVYA 798
RESULT 10
US-09-792-127-5
; Sequence 5, Application US/09792127
; Patent No. US2002002713A1
; GENERAL INFORMATION:
; APPLICANT: Allen, Steve
; APPLICANT: Beckles, Diane M.
; APPLICANT: Butler, Karla
; APPLICANT: Pearlstein, Rich
; TITLE OF INVENTION: Starch Branching Enzyme IIB
; FILE REFERENCE: BB1439 US NA
; CURRENT APPLICATION NUMBER: US/09/792,127
; PRIOR FILING DATE: 2001-02-23
; PRIOR FILING DATE: 2000-03-01
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 5
; LENGTH: 829
; TYPE: PRT
; ORGANISM: Hordeum vulgare
US-09-792-127-5
Query Match 69.4%; Score 3152.5; DB 9; Length 829;
Best Local Similarity 74.2%; Pred. No. 2.8e-292;
Matches 570; Conservative 86; Mismatches 99; Indels 19; Gaps 6;
Qy 68 VLDPG-----RIE-CYSSSTQLEAPGTVSESOVLTDVESLIMDDKI--VEDEVN 115
Db 64 MPDGGSGSGTTPPSIEGVSQFESDDEVP-FIDDEPSLHDGGEDTIRSETYQVTEID 122
Qy 116 KESVPM--RETVSTRKIGSKPRISPPGGRQRIYDIDPSLGFROHLDYRYSQYKRLREE 173
Db 123 AEGVSRMDKESSTVKKI---RIVPQPGNGQQIYDIDPMLRDFKYHLEYRSLYRIRSD 178
Qy 174 IDKYEGLDASRGYKFGFSESGITTYREWAPGATWAALIGDNNWPNADVMTQNEC 233
Db 179 IDEYDGGMDVFSRGYKFGFVRSAGITTYREWAPGADSAALVGDNNWDPDTADHMSKNDL 238
Qy 234 GWEIFLNNADGSPPIPHGRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYDP 293
Db 239 GIWEIFLNNADGSPPIPHGRVKIRMDTPSGTKDSIPAWIKYSVQTPGDIYNGIYDP 298
Qy 294 PEEKYVFNKPPQKPKSLRIYSHVGMSSPEPKINTYANFRDVLPRIKKLGYNVAVOIM 353

Db 299 PEEKYVFNKPPQKPKSLRIYSHVGMSSPEPKINTYANFRDVLPRIKKLGYNVAVOIM 358
Qy 354 AIQSHSYASFGYHVTNFFYAASSRFGTDDLLSKSLIDKAHELGLJLVMDIVHSHASTNTLD 413
Db 359 AIQSHSYASFGYHVTNFFYAASSRFGTDDLLSKSLIDKAHELGLJLVMDIVHSHASTNTLD 418
Qy 414 GLNPFDTGDGHYFHSGRGHHMMWDSRLFNFGNWEVLRFLLSNARWMLLEEKYKFDGFRD 473
Db 419 GLNPFDTGDGHYFHSGRGHHMMWDSRLFNFGNWEVLRFLLSNARWMLLEEKYKFDGFRD 478
Qy 474 VTSMMYTHHGLQVDTGNVNEFYGVATDVAVVYMLLNDMIHGLFPEAVTIGEDVSGMP 533
Db 479 ATSMYTHHGLQVDTGNVNEFYGVATDVAVVYMLLNDMIHGLFPEAVTIGEDVSGMP 538
Qy 534 TVCIPVEDGGVDFYRLHMAVADKWEI IQRDEDMKMDIVHMLTNRRLWLEKCVSYAES 593
Db 539 TFALPVHDGGVDFYRLHMAVADKWEI IQRDEDMKMDIVHMLTNRRLWLEKCVSYAES 598
Qy 594 HDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHMKMIRLITMGLGGEGYLNFM 653
Db 599 HDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHMKMIRLITMGLGGEGYLNFM 658
Qy 654 GNEFGHPWIDFPRGDLHLPSCGFVPGNNYSYDKCRRRFDLGNCKHLYHGMQDFDQAIQ 713
Db 659 GNEFGHPWIDFPRGDLHLPSCGFVPGNNYSYDKCRRRFDLGNCKHLYHGMQDFDQAIQ 718
Qy 714 HLEAYGFWTSEHQYISRKDERDRIIVFERGNLVFVFNFWHTSSYSYDYRVLGCKPGKYKI 773
Db 719 HLEQYEFWTSYHQYISRKDEEDKVIIVFEKGDVLFVFNFWHTSSYSYDYRVLGCKPGKYKI 778
Qy 774 VLSDDDPLFGGFRGLSHDAEHFSGEGYDNRPRSFVMTPTCRTAVVYA 821
Db 779 VLSDAGLFGGFRGLSHDAEHFSGEGYDNRPRSFVMTPTCRTAVVYA 826
RESULT 11
US-09-792-127-2
; Sequence 2, Application US/09792127
; Patent No. US2002002713A1
; GENERAL INFORMATION:
; APPLICANT: Allen, Steve
; APPLICANT: Beckles, Diane M.
; APPLICANT: Butler, Karla
; APPLICANT: Pearlstein, Rich
; TITLE OF INVENTION: Starch Branching Enzyme IIB
; FILE REFERENCE: BB1439 US NA
; CURRENT APPLICATION NUMBER: US/09/792,127
; PRIOR FILING DATE: 2001-02-23
; PRIOR FILING DATE: 2000-03-01
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 2
; LENGTH: 695
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-09-792-127-2
Query Match 69.3%; Score 3148; DB 9; Length 695;
Best Local Similarity 80.7%; Pred. No. 5.6e-292;
Matches 556; Conservative 71; Mismatches 62; Indels 0; Gaps 0;
Qy 133 KPRISPPGGRQRIYDIDPSLGFROHLDYRYSQYKRLREEIDKYEGLDASRGYKFG 192
Db 4 KLRILPPGNGQQIYDIDPSLGFROHLDYRYSQYKRLREEIDKYEGLDASRGYKFG 63
Qy 193 FSRSETGITYREWAPGATWAALIGDNNWPNADVMTQNECQYWEIFLNNADGSPPIPH 252
Db 64 FMRSAEGITTYREWAPGADSAALVGDNNWDPADHMSKNDLGVWEIFLNNADGSPPIPH 123
Qy 253 GSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYDPPEBEKVFKNPQPKPKSL 312
Db 124 GSRVKIRMDTPSGIKDSIPAWIKYSVQTPGDIYNGIYDPPEBEKVFKNPQPKPKSL 183

		Matches 401; Conservative 114; Mismatches 170; Indels 58; Gaps 12;	
Qy	132 SKPR-----SIPPGQGR-----IYDIDPSLTGFRQHLDRYSQY 167		
Db	40 SSRRSRWPKVKTNFSVPATARKNKTMVTVVVEVDHLPFIYDLDPKLEEFKDFHFNIRKRY 99		
Qy	168 KRLREIDKYESLDAPSGYKFGSRSETGITVREWAPGATWAAALIGDFNNNNPNADV 227		
Db	100 LDQKCLIEKHGGLLEFSKGLKFGINTVDGATVREWAPAAQALIGEFNNWNGAKHK 159		
Qy	228 MTONECGWEIFLPNADGSPPIPHGSRVKIRMDTPSGN-XDSIPAMIKFSVQAPGEL-- 284		
Db	160 MEKDKFGIWSIKI-SHVNGKPAIPHNSKVKFRHRGGAGWVDRIIPAMIRVATPDASKFGA 218		
Qy	285 PYNGIYDPPPEEKYVFNQPKPKSLRIYESHVGHMSSTPEVINTYANFRDDVLPRIKK 344		
Db	219 PYDGVHNDPPACERYVFKHPRPPKDPAPRIYEAHVGHMSGEEPEVSTYREFADNVLPPIRA 278		
Qy	345 LGYNAVQLMAIQEHSYYASFGYHVTFNFAASSRRFGTDDDKSLIDKAHELGLLVLMDIVH 404		
Db	279 NNYNTVQLMAIWEHSYYASFGYHVTFNFPVAVSRSGTPEDLKYLVDKAHSLGLRVLMVVH 338		
Qy	405 SHASTNTLDGLNMF-DTGDH--YFHSGPRGHMWDRLFNYSWEVIRELLSNARWL 461		
Db	339 SHASNNVTDLGLNGYDVQGNTHESYFHTGDRGYHKLWDSRLFNANWEVIRELLSNLRYYM 398		
Qy	462 DEYKFDGFRFGVTSMTYTHHGLQVDFGNYNEYFGYATDVDAVYLLMLNDMIHGLPPE 521		
Db	399 DEFMPDGFDFGVTSMLYHHRGINKGFTGNYKEYFSLDTVDVAIVYMLANHLMLHKLPE 458		
Qy	522 AVTIGEDVSGMPTVCIPVEDGVGVDFYRLHMAVADKWVEIIQ-KRDEDWKGDIWHMLTN 580		
Db	459 ATIVAEDVSGMPLVCRPVDEGVGVDFRLMAIPDRWIDYLNKEDRKMSSEIVQITLN 518		
Qy	581 RWLEKCVSYAESHDQALVGDKTIAFLWMDKMDYDFMALDRPSTPLIDRGVALHKMIRLI 640		
Db	519 RRYTEKCIAYAESHDQSIQVGDKTIAFLMDKEMVTGMSDLQPASPTINRGIALQKMIHFI 578		
Qy	641 TWGLGEGYIAFMGNEFGHPWIDPPRGDLHLPSCGFVPGNYSYDKCRRFPDLGNSKHL 700		
Db	579 TMAILGGDGYIAFMGNEFGHPWIDPPR-----EGNNWSYDKCRRQWSLVDTDHL 627		
Qy	701 RY-----HGWOEFDAQIQLHEAYGPMTSEHQVISRKDERDRIIVPERGNLVFVFNPH 753		
Db	628 RYKVPKYINTYNAPDQANNALEEFSLSSKQIVSDMNEKDKVIVFERGDLVFNFNH 687		
Qy	754 WTSYSYDYRVGCLKPGKYKIVLSDSDPLFGGFGRLSHDAHF-SFEGW-----YDNRP 805		
Db	688 PNKTYKYGKVGCDLPKYRVALSDSALVFGHGRVGHVDHFTSPGMPGVPETNFNRP 747		
Qy	806 RSFWYITPCRTAVVYALVEVE 828		
Db	748 NSFVLSPPRTCAVYRVDEDE 770		

Search completed: July 13, 2004, 16:13:00
Job time : 54 secs

Result No.	Score	Query		Length	DB	ID	Description
		Match	%				
1	3387.5	74.5	878	3	US-09-087-277-2		Sequence 2, Appli
2	3387.5	74.5	878	4	US-09-658-499-2		Sequence 2, Appli
3	3261.5	71.8	814	4	US-09-731-166-10		Sequence 10, Appli
4	3209	70.6	729	4	US-09-609-040-4		Sequence 4, Appli
5	3169	69.7	799	4	US-09-731-166-12		Sequence 12, Appli
6	3160	69.5	799	3	US-08-941-445A-15		Sequence 15, Appli
7	2204	48.5	464	3	US/09/087		Sequence 4, Appli
8	2204	48.5	464	4	US-09-658-499-4		Sequence 4, Appli
9	2192.5	48.2	906	4	US-09-367-895-41		Sequence 41, Appli
10	2124	46.7	822	3	US-08-941-445A-17		Sequence 17, Appli
11	2124	46.7	822	4	US-09-731-166-14		Sequence 14, Appli
12	1635.5	36.0	566	3	US-08-104-158-2		Sequence 2, Appli
13	1335.5	36.0	566	4	US-09-609-040-2		Sequence 2, Appli
14	576	12.7	762	4	US-09-579-365-2		Sequence 2, Appli
15	570	12.5	621	4	US-09-537-120-2		Sequence 2, Appli
16	550.5	12.1	768	4	US-09-489-039A-11131		Sequence 11131, A
17	542.5	11.9	652	3	US-08-528-026C-4		Sequence 4, Appli
18	520	11.4	722	4	US-09-198-452A-513		Sequence 513, Appli
19	503.5	11.1	823	3	US-09-252-991A-24768		Sequence 24768, A
20	266.5	5.9	559	3	US-09-242-690A-15		Sequence 15, Appli
21	266.5	5.9	559	4	US-09-298-924-6		Sequence 6, Appli
22	266.5	5.9	559	4	US-09-508-855-15		Sequence 15, Appli
23	266.5	5.9	648	4	US-09-252-991A-24628		Sequence 24628, A
24	245	5.4	893	4	US-09-514-302-4		Sequence 4, Appli
25	245	5.4	1938	4	US-09-514-302-2		Sequence 2, Appli
26	243.5	5.4	793	4	US-09-463-238-5		Sequence 5, Appli
27	232.5	5.1	606	3	US-09-187-124-2		Sequence 2, Appli

Qy 209 ATWAALIGDFNNPNADVMTONECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
Db 243 AQSAAALIGDFNNPNADVMTONECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSGVKD 302
Qy 269 SIPAWIKFSVQAPGELPYNGIYDPPPEEKYVFNKPPKPSLRISHVHSGMSSTPVI 328
Db 303 SIPAWINYSQLPDEIPYNGIYDPPPEEKYVFNKPPKPSLRISHVHSGMSSTPVI 362
Qy 329 NYANFRDDVLPRIKGLGNVAVQLMAIQEHSYASFGYHVTNFYAAASRRGTDPDLKSLI 388
Db 363 NSYVNFDEVLPRIKGLGNVAVQLMAIQEHSYASFGYHVTNFYAAASRRGTDPDLKSLI 422
Qy 389 DKAHELGLLVMDIVHSHASNNTLDGLNMPDGTGHHYFHSRGRHNMWDSRLFNYSWE 448
Db 423 DKAHELGLLVMDIVHSHASNNTLDGLNMPDGTGHHYFHSRGRHNMWDSRLFNYSWE 482
Qy 449 VLRLLSNARWLDDEYKFDGFRDGVTSMMYTHHGLQVDFGTGNYNEYFGYATDVAVVYL 508
Db 483 VLRLLSNARWLDDEYKFDGFRDGVTSMMYTHHGLSVGFTGNYEYFGLATDVAVVYL 542
Qy 509 MLNDMTHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDRLLHMAVADKWVEIIQKDED 568
Db 543 MLVNDLHGLFPDAITIGEDVSGMPTFXIPVQDGGVGFDRLLHMAIADKWIELLKGRDED 602
Qy 569 WKMGDIVHMLTNRRLWLEKVCVSAESHDQALVGDKTIAFWLMDKMDYDFMALDRSTPLID 628
Db 603 WRVGDIVHTLTNRRLWSEKVCVSAESHDQALVGDKTIAFWLMDKMDYDFMALDRSTPLID 662
Qy 629 RGVALHKMIRLITMGLGEGYLNFMGNFEGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKC 688
Db 663 RGIALHKMIRLVTMGLGEGYLNFMGNFEGHPEWIDFPRAEQHLSDGSVIPGNQFSYDKC 722
Qy 689 RRRFDLGNKHLRYHGMQEFQOAHLEEAAGFMTSEHOYISRKDEDRRIIVFERGNLVP 748
Db 723 RRRFDLGNKHLRYHGMQEFQOAHLEEAAGFMTSEHOYISRKDEDRRIIVFERGNLVP 782
Qy 749 VFNPHWTSSYDYRIGCLPKPKYKIVLSDDDPLFGGFGRLSHDAEHFSEFGWYDNRPRSF 808
Db 783 VFNPHWTSSYDYRIGCLPKPKYKIVLSDDDPLFGGFGRLSHDAEHFSEFGWYDNRPRSI 842
Qy 809 MYTPCPTAVVYALVDEVEENELE 832
Db 843 MYAPSRRTAVVYALVDKEEEEE 866

RESULT 2
US-09-658-499-2
; Sequence 2, Application US/09658499
; Patent No. 6469231
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/09/658,499
; CURRENT FILING DATE: 2000-09-08
; PRIOR APPLICATION NUMBER: 09/087,277
; PRIOR FILING DATE: 1998-05-29
; PRIOR APPLICATION NUMBER: PCT/SE96/01558
; PRIOR FILING DATE: 1996-11-28
; PRIOR APPLICATION NUMBER: SE 9504272-7
; PRIOR FILING DATE: 1995-11-29
; PRIOR APPLICATION NUMBER: SE 9601506-0
; PRIOR FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 878
; TYPE: PRT
; ORGANISM: Unknown

; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:bell gene (branching enzyme II) f:
; OTHER INFORMATION: Solanum tuberosum (potato)
US-09-658-499-2

Query Match 74.5%; Score 3387.5; DB 4; Length 878;
Best Local Similarity 71.9%; Pred. No. 0;
Matches 621; Conservative 92; Mismatches 116; Indels 35; Gaps 5;

Qy 4 YTTISGRFPAP-LCKSQSTGFGHYRRTSSCLSFNKEAFSRVFGSKSHESDSSNMVY 62
Db 3 YTTISGRVFPVPSVYKSNFSSNGDRNANKSVFLKKSLSRKLAKSSYNSESAPSTV 62
Qy 63 TSKRVL-PDGRTECYSSSTDLQLEAPCTVSEESQVLTDESLLMDD----KIVEDEV--- 114
Db 63 AASGKVLVPTQSDSSSSSTDDQEFPTETSPENSPASTDVSSTWEHARQIKTENDDDVEPS 122
Qy 115 -----NKESYPMRETVSIRKIGS-----KPSRIPPPGRGRIYD 148
Db 123 SDLTGSVEELDPASSLQLOEGGKLEBSKTLNTSEETIIDESDRIRERGIPPGLGQKIYE 182
Qy 149 IDPSLTGFRHLDYRYSQYKRLREEIDKYEGSLDAFSRGYKEFGFSRSEGTITRYEWAPG 208
Db 183 IDPELLTYRQHLDRYSQYKRLREADIKYEGGLEAFSRGKMGFTRSATGITRYEWAPG 242
Qy 209 ATWAALIGDFNNPNADVMTONECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
Db 243 AQSAAALIGDFNNPNADVMTONECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSGVKD 302
Qy 269 SIPAWIKFSVQAPGELPYNGIYDPPPEEKYVFNKPPKPSLRISHVHSGMSSTPVI 328
Db 303 SIPAWINYSQLPDEIPYNGIYDPPPEEKYVFNKPPKPSLRISHVHSGMSSTPVI 362
Qy 329 NYANFRDDVLPRIKGLGNVAVQLMAIQEHSYASFGYHVTNFYAAASRRGTDPDLKSLI 388
Db 363 NSYVNFDEVLPRIKGLGNVAVQLMAIQEHSYASFGYHVTNFYAAASRRGTDPDLKSLI 422
Qy 389 DKAHELGLLVMDIVHSHASNNTLDGLNMPDGTGHHYFHSRGRHNMWDSRLFNYSWE 448
Db 423 DKAHELGLLVMDIVHSHASNNTLDGLNMPDGTGHHYFHSRGRHNMWDSRLFNYSWE 482
Qy 449 VLRLLSNARWLDDEYKFDGFRDGVTSMMYTHHGLQVDFGTGNYNEYFGYATDVAVVYL 508
Db 483 VLRLLSNARWLDDEYKFDGFRDGVTSMMYTHHGLSVGFTGNYEYFGLATDVAVVYL 542
Qy 509 MLNDMTHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDRLLHMAVADKWVEIIQKDED 568
Db 543 MLVNDLHGLFPDAITIGEDVSGMPTFXIPVQDGGVGFDRLLHMAIADKWIELLKGRDED 602
Qy 569 WKMGDIVHMLTNRRLWLEKVCVSAESHDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLID 628
Db 603 WRVGDIVHTLTNRRLWSEKVCVSAESHDQALVGDKTIAFWLMDKMDYDFMALDRXSTSLID 662
Qy 629 RGVALHKMIRLITMGLGEGYLNFMGNFEGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKC 688
Db 663 RGIALHKMIRLVTMGLGEGYLNFMGNFEGHPEWIDFPRAEQHLSDGSVIPGNQFSYDKC 722
Qy 689 RRRFDLGNKHLRYHGMQEFQOAHLEEAAGFMTSEHOYISRKDEDRRIIVFERGNLVP 748
Db 723 RRRFDLGNKHLRYHGMQEFQOAHLEEAAGFMTSEHOYISRKDEDRRIIVFERGNLVP 782
Qy 749 VFNPHWTSSYDYRIGCLPKPKYKIVLSDDDPLFGGFGRLSHDAEHFSEFGWYDNRPRSF 808
Db 783 VFNPHWTSSYDYRIGCLPKPKYKIVLSDDDPLFGGFGRLSHDAEHFSEFGWYDNRPRSI 842
Qy 809 MYTPCPTAVVYALVDEVEENELE 832
Db 843 MYAPSRRTAVVYALVDKEEEEE 866

RESULT 3
US-09-731-166-10
; Sequence 10, Application US/09731166

Patent No. 6639126
GENERAL INFORMATION:
APPLICANT: Sewalt, Vincent J. H.
APPLICANT: Singletary, George W.
TITLE OF INVENTION: Production of Modified Polysaccharides
FILE REFERENCE: 35718/206348
CURRENT APPLICATION NUMBER: US/09/731,166
CURRENT FILING DATE: 2000-12-06
PRIOR APPLICATION NUMBER: 60/169,993
PRIOR FILING DATE: 1999-12-06
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 10
LENGTH: 814
TYPE: PRT
ORGANISM: Zea mays
US-09-731-166-10

Query Match 71.8%; Score 3261.5; DB 4; Length 814;
Best Local Similarity 74.0%; Pred. No. 8.6e-309;
Matches 604; Conservative 70; Mismatches 109; Indels 33; Gaps 5;
QY 36 ENFEAFRRVPS-----GKSHESDSNNVMTASKRV-----LPGRIECYSST 81
DB 7 FRKDAFRTVLSCAGAFKVLVPCGGSDLLSSAEPVDTQPPELQIPEAEALTVEKTSS 66
QY 82 DQLEAPGTVSESOVLTDVESLIMDDKI-----VEDEVKESVPMRETVSIRKIGS 132
DB 67 SPTQTTSAVAENASSGVEAEERPELSEVIGVGTGKTIDGAIKAKAFLE-----E 118
QY 133 KPRSIPPGCGQRIYIDPSLTGFRQHLDRYSQYKRLREEDIDYEGSLDAFSRGYKFG 192
DB 119 KPRVIPPDCGQRIYIDPMLEGGFRGLDRYSEYKRLRAALDQHEGGLDAFSRGYKLG 178
QY 193 FSRSTGITYREWARCATWAALIGFNNWPNADVMTONECGWEIFLPPNADGSPPIPH 252
DB 179 FTRSAEGITYREWARCATWAALIGFNNWPNADVMTONECGWEIFLPPNADGSPAIPH 238
QY 253 GSRVKIRMDTPSGNKDSIPAMIKFSVQAPGELPYNGIYYDPEEEKYVFPKQPQPKSL 312
DB 239 GSRVKIRMDTPSGNKDSIPAMIKFSVQAPGELPYNGIYYDPEEEKYVFPKQPQPKSL 298
QY 313 RIYESHVGMSSTPEVINTYANFRDVLPRIKKLGYNNAVQLMAIOEHSYYASFGYHVTNFY 372
DB 299 RIYESHVGMSSTPEVINTYANFRDVLPRIKKLGYNNAVQLMAIOEHSYYASFGYHVTNF 358
QY 373 AASSRFGTDDLSLIDKAHELGLLVMDIVHSHASTNTLDGLNPFDTGDGHYFHSGPRG 432
DB 359 APSRRFGTDDLSLIDKAHELGLLVMDIVHSHASTNTLDGLNPFDTGDGHYFHSGPRG 418
QY 433 HHMMDSRLFNYSWEVLRFLLSNARWMLDEYKFGFRPDGVTSMYTHHGLQVDFTCNY 492
DB 419 HHMMDSRLFNYSWEVLRFLLSNARWMLDEYKFGFRPDGVTSMYTHHGLQVDFTCNY 478
QY 493 NEYFGYATDVAVVYLMNLMDIHLGFLPEAVTIGEDVSGMPTVCIPVEDGGVGDFYRLHM 552
DB 479 GEYFGFATDVAVVYLMNLMDIHLGFLPEAVTIGEDVSGMPTVCIPVEDGGVGDFYRLHM 538
QY 553 AVADKWEIIOKRDEWKGDIIVHMLTNRRLWLEKVCVSAEASHDQALVGDKTIAFWLMDKD 612
DB 539 AVPDKWEIILKQSDYEWBGDIIVHMLTNRRLWLEKVCVSAEASHDQALVGDKTIAFWLMDKD 598
QY 613 MYDFMALDRPSTPLIDRGVALHMKIRLITMGLGGEGYLNFMGNEFGHPWIDFPRGDLHL 672
DB 599 MYDFMALDRPSTPLIDRGVALHMKIRLITMGLGGEGYLNFMGNEFGHPWIDFPRGDLHL 658
QY 732 PSGKEVPGNNYSYDKRCRRFOLGNSKHLRYHGMQEFDOAIQHLEAAYGFMFSEHQYISRK 732
DB 659 PNGSVIPGNNNSFDKRCRRFOLGNSKHLRYHGMQEFDOAIQHLEAAYGFMFSEHQYISRK 718
QY 733 DERDRIIVFERGNLIVFVNFHWTSSYDYRVGCLKPGYKIVLSDDDPLFGGFRGLSHDA 792
DB 719 HEEDKVIIFERGNLIVFVNFHWTSSYDYRVGCLKPGYKIVLSDDDPLFGGFRGLSHDA 778

QY 793 EHSEFEGWYDNRPSPFMVYTPCRTAVVVAL--VEDE 826
DB 779 EYFTADWPHDNRPCSFVSYPASRTAVVYAPAGAED 814

RESULT 4

US-09-609-040-4
Sequence 4, Application US/09609040
Patent No. 6570066
GENERAL INFORMATION:
APPLICANT: Willmitzer, et al.
TITLE OF INVENTION: NUCLEOTIDE SEQUENCES ENCODING ENZYMES THAT ALTER THE CARBOHYDRATE
FILE OF INVENTION: CONCENTRATION AND COMPOSITION IN PLANTS
FILE REFERENCE: 514413-3515.1
CURRENT APPLICATION NUMBER: US/09/609,040
CURRENT FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: PCT/EP92/00302
PRIOR FILING DATE: 1992-02-11
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version 3.0
SEQ ID NO 4
LENGTH: 729
TYPE: PRT
ORGANISM: Triticum aestivum
US-09-609-040-4

Query Match 70.6%; Score 3209; DB 4; Length 729;
Best Local Similarity 78.0%; Pred. No. 9.4e-304; Indels 10; Gaps 3;
Matches 575; Conservative 75; Mismatches 77;
QY 88 GTVSEESQVLTDVESLIMDDKIYDEVKESVPMRETVSIRKIGSKPRSPPPGGRGRIY 147
DB 3 GGTAEKLQSSEPTQIV---ETITDGVTK---GVKELV---VGEKRVVVPKPGDGQKIY 52
QY 148 DIDPSLTGFRQHLDRYSQYKRLREEDIDYEGSLDAFSRGYKFGFRSETGITYREWAR 207
DB 53 EIDPTLDFRSHLDYRYREYKIRAAIDQHEGGLDAFSRGYKLGFTRSAEGITYREWAR 112
QY 208 GATWAALIGFNNWPNADVMTONECGWEIFLPPNADGSPPIPHGSRVKIRMDTPSGNK 267
DB 113 GAHSAALGVDFNNWPNADVMTONECGWEIFLPPNADGSPPIPHGSRVKIRMDTPSGNK 172
QY 268 DSIPAWIKFSVQAPGELPYNGIYYDPEEEKYVFPKQPQPKSLRIYESHVGMSSTPEV 327
DB 173 DSISAWIKFSVQAPGELPYNGIYYDPEEEKYVFPKQPQPKSLRIYESHVGMSSTPEV 232
QY 328 INTYANFRDVLPRIKKLGYNNAVQLMAIOEHSYYASFGYHVTNFYAASSRFGTDDLSL 387
DB 233 INSANFRDVLPRIKKLGYNNAVQLMAIOEHSYYASFGYHVTNFYAASSRFGTDDLSL 292
QY 388 IDKAHELGLLVMDIVHSHASTNTLDGLNPFDTGDGHYFHSGPRGHMMDSRLFNYSW 447
DB 293 IDRAHELGLLVMDIVHSHASTNTLDGLNPFDTGDGHYFHSGPRGHMMDSRLFNYSW 352
QY 448 EVLRFLLSNARWMLDEYKFGFRPDGVTSMYTHHGLQVDFTCNYNEFYGYATDVAVVY 507
DB 353 EVLRFLLSNARWMLDEYKFGFRPDGVTSMYTHHGLQVDFTCNYNEFYGYATDVAVVY 412
QY 508 LMLNDMIHLGFLPEAVTIGEDVSGMPTVCIPVEDGGVGDFYRLHMAVADKWEIIOKRDE 567
DB 413 LMLVNDLIHLGFLPEAVTIGEDVSGMPTVCIPVEDGGVGDFYRLHMAVADKWEIIOKRDE 472
QY 568 DWKMGDIIVHMLTNRRLWLEKVCVSAEASHDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLI 627
DB 473 SWKMGDIIVHMLTNRRLWLEKVCVSAEASHDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLI 532
QY 628 DRGVALHMKIRLITMGLGGEGYLNFMGNEFGHPWIDFPRGDLHLPSGKFPVGNNSYDK 687
DB 533 DRGVALHMKIRLITMGLGGEGYLNFMGNEFGHPWIDFPRGDLHLPSGKFPVGNNSYDK 592
QY 688 CRRRFDLGNSKHLRYHGMQEFDOAIQHLEAAYGFMFSEHQYISRKDRRIIVFERGNLV 747
DB 719 CRRRFDLGNSKHLRYHGMQEFDOAIQHLEAAYGFMFSEHQYISRKDRRIIVFERGNLV 747

Db 593 CRRRFDLGDABFLRYRGHMQEFDQAMQHLKEEYGFMTSEHQYVSRKHEEDKVIIFERGDV 652
Qy 748 FVFNPHMTSSYSDYRVGCLKEGKYKIVLSDSDPLFGGRLSHDAEHFSPGWDNRPRS 807
Db 653 FVFNPHMNSFDRYRVGSKFGKVALDSDDALFGGFSRLDHDVDVFTTPEHPRNPRS 712
Qy 808 FMVYTPCRTAVVYALVE 824
Db 713 FSVYTPRTAVVYALTE 729
RESULT 5
US-09-731-166-12
; Sequence 12, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
; APPLICANT: Sewalt, Vincent J. H.
; APPLICANT: Singletary, George W.
; TITLE OF INVENTION: Production of Modified Polysaccarides
; FILE REFERENCE: 35718/206348
; CURRENT APPLICATION NUMBER: US/09/731,166
; CURRENT FILING DATE: 2000-12-06
; PRIOR APPLICATION NUMBER: 60/169,993
; FILING DATE: 1999-12-06
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 799
; TYPE: PRT
; ORGANISM: Zea mays
US-09-731-166-12
Query Match 69.7%; Score 3169; DB 4; Length 799;
Best Local Similarity 74.4%; Pred. No. 8.8e-300;
Matches 574; Conservative 80; Mismatches 78; Indels 40; Gaps 5;
Qy 64 ASKRLV-PDG-----RIEYSSSTDOLEAPGTVSEESQV---LTDVESLIMDDKIVED 112
Db 57 ARKAVVPEGENGLASRADSAQSQSDELEVP-DISETTGAGVADAQAL----- 106
Qy 113 EVNKESVPMRETVSIRKIGSKPRISPPGGRQRIYDIDPSLTGFRQHLDRYSQYKRLRE 172
Db 107 -----NRVRVPPSPDSQKIFQIDPMLQGYKYHLEYRYSLYRRIRS 147
Qy 173 EIDYKESGLDAFSGYKFKFSRSETGITYREWAPGATWAALIGDNNNNPNADVMTONE 232
Db 148 DIDEHEGLEAFSRYSEYKFGNRSABGITYREWAPGAFSAALVGDNNNDPNDRMSKNE 207
Qy 233 CGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAMIKFSVQAPGELPYNGIYD 292
Db 208 FGWEIFLPNNADGTSPIPHGSRVKVRMDTPSGIKDSIPAMIKYSVQAPGELPYDGIYD 267
Qy 293 PPEEKYVFNQPKPRKPSKRIYSHVGMSTPEVINTYANFRDDVLPRIKKLGYNVQL 352
Db 268 PPEEVKYVFRHAQPKRPSKRIYETHVGMSSPEPKINTYVNFREDVLPRIKKLGYNVQI 327
Qy 353 MAIQEHSYVYASGVHVTNFIYAASSRFGTTPDLKSLIDKAEHLGLLVMDIVHSHASTNTL 412
Db 328 MAIQEHSYVYSGYHVTNFIYAFSSRFGTTPDLKSLIDRAHEGLLVMDIVHSHASTNTL 387
Qy 413 DGLNMFDTGDGTHYFHSGRGHHMMWDSRLFNYSMEVLRFLLSNARWLDYKFDGRFD 472
Db 368 DGLNFGDGTGTHYFHSGRGHHMMWDSRLFNYSMEVLRFLLSNARWLDYKFDGRFD 447
Qy 473 GVTSMYTHHGLQVDTGNGYNEFYGATVDVAVVYVLLNDMIMHGLFPEAVTIGEDVSGM 532
Db 448 GVTSMYTHHGLQVDTGNGYNEFYGATVDVAVVYVLLNDMIMHGLFPEAVTIGEDVSGM 507
Qy 533 PTVCTIPVDDGGGFDYRLHMAVADKWEIIOKRDEDMKMGDIDVMLTNRWLEKCVSYAE 592
Db 508 PTFALPVHDDGGGFDYRLHMAVADKWEIIDLKQSDETKMGDILVHTLTNRWLEKCVTYAE 567
Qy 593 SHDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHMKIRLITMGLGEGYLN 652

Db 568 SHDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLIDRGVALHMKIRLITMGLGEGYLN 627
Qy 653 MGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNKHLRVHGMQEDQAI 712
Db 628 MGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNKHLRVHGMQEDQAM 687
Qy 713 QHLEAYGFMTEHQYISRKDERDRIIVFERGNLGVFVFNPHMTSSYSDYRVGCLKPGKYK 772
Db 688 QHLEQYEFMTSDHQYISRKHEEDKIVFEKGLVFEKGLVFEKGLVFEKGLVFEKGLVFEK 747
Qy 773 IVLSDSDPLFGGRLSHDAEHFSGWYDNRPRSFMVYTPCRTAVVYALVE 824
Db 748 VVLDSDAGLFGGFSRIHHAHEHFTADCSHDNRPSFSVYTPSRTCVVYADVE 799
RESULT 6
US-08-941-445A-15
; Sequence 15, Application US/08941445A
; Patent No. 6107060
; GENERAL INFORMATION:
; APPLICANT: Keeling, Peter
; APPLICANT: Guan, Hanping
; TITLE OF INVENTION: Starch Encapsulation
; NUMBER OF SEQUENCES: 37
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Greenlee, Winner and Sullivan, P.C.
; STREET: 5370 Manhattan Circle
; CITY: Boulder
; STATE: CO
; COUNTRY: US
; ZIP: 80303
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/941,445A
; FILING DATE: 30-SEP-1997
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/026,855
; FILING DATE: 30-SEP-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Winner, Ellen P
; REGISTRATION NUMBER: 28,547
; REFERENCE/DOCKET NUMBER: 89-97
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (303) 499-8080
; TELEFAX: (303) 499-8089
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 799 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-941-445A-15
Query Match 69.5%; Score 3160; DB 3; Length 799;
Best Local Similarity 74.2%; Pred. No. 6.7e-299;
Matches 573; Conservative 79; Mismatches 80; Indels 40; Gaps 5;
Qy 64 ASKRLV-PDG-----RIEYSSSTDOLEAPGTVSEESQV---LTDVESLIMDDKIVED 112
Db 57 ARKAVVPEGENGLASRADSAQSQSDELEVP-DISETTGAGVADAQAL----- 106
Qy 113 EVNKESVPMRETVSIRKIGSKPRISPPGGRQRIYDIDPSLTGFRQHLDRYSQYKRLRE 172
Db 107 -----NRVRVPPSPDSQKIFQIDPMLQGYKYHLEYRYSLYRRIRS 147
Qy 173 EIDYKESGLDAFSGYKFKFSRSETGITYREWAPGATWAALIGDNNNNPNADVMTONE 232

Db 148 DIDEHEGGLAEFSRSEYKGFNFASAEIGITYREWAFSAALVGVNWNVDNADRMKSNE 207
Qy 233 CQWEIFLPPNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYD 292
Db 208 FGVWEIFLPPNADGSPPIPHGSRVKIRMDTPSGIKDSIPAWIKYSVQAPGIPDGIYD 267
Qy 293 PPEEKYVFNQPKPKRPSLRIRYESHVGMSSSTEPVINTYANFRDVLPRIKKLGYNAYQL 352
Db 268 PPEEVKYVFRHAQPKRPSLRIRYETHVGMSSPEPKINSYVNFDRDVLPRIKKLGYNAYQI 327
Qy 353 MAIQSHSYASFGYHVTNFFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNLT 412
Db 328 MAIQSHSYSGFGYHVTNFFAPSSRFGTPEDKSLIDRAHELGLLVLMDIVHSHASTNLT 387
Qy 413 DCLNMFDTGDGHYFHSGRGHHMMWDSRLFNYSWMEVLRLFLSNARWMLDEVKFGDFRFD 472
Db 388 DCLNGFDGTDTHYFHSGRGHHMMWDSRLFNYSWMEVLRLFLSNARWMLDEVKFGDFRFD 447
Qy 473 GVTSMYTHGLQVDFGTGNNEFYGYATDVAVVYLLMLNDMIHGLFPEAVTIGEDVSGM 532
Db 448 GVTSMYTHGLQVDFGTGNNEFYGYATDVAVVYLLMLNDMIHGLFPEAVTIGEDVSGM 507
Qy 533 PTVCIPEVDEGGVGFYRHLMAVADKWEIIQKRDDEWKGMDIVHMLTNRWLEKCVSYAE 592
Db 508 PTFALPVHDGGVGFYRHLMAVADKWEIIQKRDDEWKGMDIVHMLTNRWLEKCVSYAE 567
Qy 593 SHDQALVGDKTIAFWLMDKMDYFMDALDRPSTPLIDRGVALHMKIRLITMGLGEGYLNF 652
Db 568 SHDQALVGDKTIAFWLMDKMDYFMDALDRPSTPLIDRGVALHMKIRLITMGLGEGYLNF 627
Qy 653 MGNEFGHEWIDFPFGDLHLPSGKFVPGNNYSYDKCRRRFDLGNKHLRYHGMQEFDOAI 712
Db 628 MGNEFGHEWIDFPFGDLHLPSGKFVPGNNYSYDKCRRRFDLGNKHLRYHGMQEFDOAI 687
Qy 713 QHLEAYGFMSEHGYISRKDERDRIIVFERGNLVFNFWHTSYSDRYRGCLKPKYK 772
Db 688 QHLEQKYEFTSDHQYISRKHEEDKVIIVFEKGDVLFVFNFCNNYSYDFYRIGCRKPKYK 747
Qy 773 IVLDSDDPLFGGFGRLSHDAEHFSGEGWYDNRPSFMVYTPCRTAVVYALVE 824
Db 748 VVLDSADAGLFGGFSRIHAAEHFTADCSHDNRPSFSYTFSTRICVTVAPVE 799

RESULT 7
US/09/087
; Sequence 4, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/09/087,277B
; CURRENT FILING DATE: 1998-05-29
; EARLIER APPLICATION NUMBER: PCT/SE96/01558
; EARLIER FILING DATE: 1996-11-28
; EARLIER APPLICATION NUMBER: SE 9504272-7
; EARLIER FILING DATE: 1995-11-29
; EARLIER APPLICATION NUMBER: SE 9601506-0
; EARLIER FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 4
; LENGTH: 464
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:bell gene fragment (branching enz
US/09/087,277-4

Query Match 48.5%; Score 2204; DB 3; Length 464;
Best Local Similarity 84.0%; Pred. No. 5e-206;
Matches 389; Conservative 40; Mismatches 34; Indels 0; Gaps 0;
Qy 240 LPNVADSGPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYDPEBEKY 299
Db 1 LPNVADSGPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYDPEBEKY 60
Qy 300 VFNKQPKRPSLRIRYESHVGMSSSTEPVINTYANFRDVLPRIKKLGYNAYQLMAIOEHS 359
Db 61 IFQHPRPKPSLRIRYESHVGMSSPEPKINSYVNFDRDVLPRIKKLGYNAYQLMAIOEHS 120
Qy 360 YYASFGYHVTNFFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNLTDLGNMFD 419
Db 121 YYASFGYHVTNFFXAPSSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNLTDLGNMFD 180
Qy 420 GTDGHYFHSGRGHHMMWDSRLFNYSWMEVLRLFLSNARWMLDEVKFGDFRFDGVTSMY 479
Db 181 GTDSCYFHSARGYHMMWDSRLFNYSWMEVLRLFLSNARWMLDEVKFGDFRFDGVTSMY 240
Qy 480 THHGLQVDFGTGNNEFYGYATDVAVVYLLMLNDMIHGLFPEAVTIGEDVSGMPTVCIPV 539
Db 241 THHGLSVGFTGNVEEYEGLATDVAVVYLLMLNDLIHGLFPDAITIGEDVSGMPTVCIPV 300
Qy 540 EDGSGVGFYRHLMAVADKWEIIQKRDDEWKGMDIVHMLTNRWLEKCVSYAESHDQALV 599
Db 301 QDGGVGFYRHLMAIAKWIELLKKRDDEWVRGDIIVHTLTNRWSEKCVSYAESHDQALV 360
Qy 600 GDKTIAFWLMDKMDYFMDALDRPSTPLIDRGVALHMKIRLITMGLGEGYLNFNGNEFGH 659
Db 361 GDKTIAFWLMDKMDYFMDALDRXSTSLIDRGIALHMKIRLITMGLGEGYLNFNGNEFGH 420
Qy 660 PEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNKHLRY 702
Db 421 PEWIDFPRAGHLSDGSGVIFGNQFSDYDKCRRRFDGLDAEYLRY 463
RESULT 8
US-09-658-499-4
; Sequence 4, Application US/09658499
; Patent No. 6469231
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/09/658,499
; CURRENT FILING DATE: 2000-09-08
; PRIOR APPLICATION NUMBER: 09/087,277
; PRIOR FILING DATE: 1998-05-29
; PRIOR APPLICATION NUMBER: PCT/SE96/01558
; PRIOR FILING DATE: 1996-11-28
; PRIOR APPLICATION NUMBER: SE 9504272-7
; PRIOR FILING DATE: 1995-11-29
; PRIOR APPLICATION NUMBER: SE 9601506-0
; PRIOR FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 4
; LENGTH: 464
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:bell gene fragment (branching enz
US-09-658-499-4

Query Match 48.5%; Score 2204; DB 4; Length 464;
Best Local Similarity 84.0%; Pred. No. 5e-206;
Matches 389; Conservative 40; Mismatches 34; Indels 0; Gaps 0;

APPLICATION NUMBER: US/08/941.445A
FILING DATE: 30-SEP-1997
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/026,855
FILING DATE: 30-SEP-1996
ATTORNEY/AGENT INFORMATION:
NAME: Winner, Ellen P
REGISTRATION NUMBER: 28,547
REFERENCE/DOCKET NUMBER: 89-97
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 499-8080
TELEFAX: (303) 499-8089
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 822 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-941-445A-17

Query Match 46.7%; Score 2124; DB 3; Length 822;
Best Local Similarity 56.1%; Pred. No. 8.6e-198;
Matches 389; Conservative 112; Mismatches 167; Indels 26; Gaps 6;
Qy 146 IYDIDPSLTGFRQHLDDYRSQYKRLREEDIDKYEGLDFAFSRGEYKFGFSRSETGITTYREW 205
Db 84 IYLDLPKLEIFKDHFRYRMKRFLEQKGSIEENEGSLESFSGYLKFGINTNEDGTVYREW 143
Qy 206 APGATWAALIGDFNNWPNADVMTQNECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 265
Db 144 APAQAQAEALIGDFNNWPNADVMTQNECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 202
Qy 266 NKDSTPAWKESVQAPGEL--PYNGIYYDPPEEKYVFNKPPKSLRIYESHVGMSS 323
Db 203 WVDRIPALIRATVDASFGAPYDGVHWDPPASERYTFKHPRPSPKAPRIYEAHVGMSS 262
Qy 324 TEPVINTYANFRDDVLPRIKKLGYNVQLMAIOEHSYYASFGYHVTNPFYAASSRFGTPDD 383
Db 263 EKPAVSTYREADVNLPRIRANNYNTVQLMAVMEHSYYASFGYHVTNPFYAASSRFGTPED 322
Qy 384 LKSLIDKAHEGLGLVLMIDIVHSHASTNTLDGLNMPD---GTDGHHYFHSRGRHMMWDSR 440
Db 323 LKYLVDKAHSLGLRLVMDVHSHASNVTDLNGYDVQGSTQESYFHAGDRGYHKLWDSR 382
Qy 441 LFNYSWEVLRLFLSNARWLDYKFDGFRDGVTSMMYTHGLQVDFGTGNYNEFGYAT 500
Db 383 LFNYSANWEVLRLFLSNLRYLWDEFMDFGFRDGVTSMLYHHHGINVGTGNYQYFSLDT 442
Qy 501 DVDAVYVLMMLNDMIHGLFPPEAVTIGEDVSGMPTVCIPVEDGGVGFYRLHMAVADKWVE 560
Db 443 AVDAVYVYMLANLHMKLLPEATVVAEDVSGMPVLCRPVDEGGVGFYRLAMALPDRWID 502
Qy 561 IIOKRDE-DWKMGDIIVHMLTNRRWLEKCVSAESHQDALVGDKTIAFLMDKMDYDFMAL 619
Db 503 YLKNKDDSEWSMGEIAHTLTNRRYTEKCIAYAESHDQSIGVDKTIAPLLMDKEMYTGMSD 562
Qy 620 DRPSTPLDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEDWDFPRGDLHLPSGKFPV 679
Db 563 LQPASPTIDRGALQKMIHFTMALGGDGYLNFMGNEFGHPEDWDFPR-----E 611
Qy 680 GNNYSYDKRRRFDLGNKSLRYHGMQEFDOAIOHLEAAYGFWTSEHOYISRKDERDRII 739
Db 612 GNNYSYDKCRQWSLVDTDLHRYKYNMAFDQAMNALDERFSLSSKQIVSDMNDDEKVI 671
Qy 740 VFERGNLVFVNFHWTSSYSDYRVGCLPKGKYKIVLSDSDPLFGGFGRLSHDAEHFSF-- 797
Db 672 VFERGDLVVFNFHFKPKTYEGYKVGCDLPGKYRVALDSDALVFGHGVRGVDHFTSPE 731
Qy 798 -----EGWYDNRPRSPFMYTTPCPTAVVYALVED 825
Db 732 GVPGPETNFRNRPNSFKVLSPPTCVAYRVDE 765

RESULT 11
US-09-731-166-14
Sequence 14, Application US/09731166
Patent No. 6639126
GENERAL INFORMATION:
APPLICANT: Sewalt, Vincent J. H.
APPLICANT: Singletary, George W.
TITLE OF INVENTION: Production of Modified Polysaccarides
FILE REFERENCE: 35718/206348
CURRENT APPLICATION NUMBER: US/09/731.166
CURRENT FILING DATE: 2000-12-06
PRIOR APPLICATION NUMBER: 60/169,993
PRIOR FILING DATE: 1999-12-06
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 14
LENGTH: 822
TYPE: PRT
ORGANISM: Zea mays
US-09-731-166-14

Query Match 46.7%; Score 2124; DB 4; Length 822;
Best Local Similarity 56.1%; Pred. No. 8.6e-198;
Matches 389; Conservative 112; Mismatches 167; Indels 26; Gaps 6;
Qy 146 IYDIDPSLTGFRQHLDDYRSQYKRLREEDIDKYEGLDFAFSRGEYKFGFSRSETGITTYREW 205
Db 84 IYLDLPKLEIFKDHFRYRMKRFLEQKGSIEENEGSLESFSGYLKFGINTNEDGTVYREW 143
Qy 206 APGATWAALIGDFNNWPNADVMTQNECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 265
Db 144 APAQAQAEALIGDFNNWPNADVMTQNECGWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 202
Qy 266 NKDSTPAWKESVQAPGEL--PYNGIYYDPPEEKYVFNKPPKSLRIYESHVGMSS 323
Db 203 WVDRIPALIRATVDASFGAPYDGVHWDPPASERYTFKHPRPSPKAPRIYEAHVGMSS 262
Qy 324 TEPVINTYANFRDDVLPRIKKLGYNVQLMAIOEHSYYASFGYHVTNPFYAASSRFGTPDD 383
Db 263 EKPAVSTYREADVNLPRIRANNYNTVQLMAVMEHSYYASFGYHVTNPFYAASSRFGTPED 322
Qy 384 LKSLIDKAHEGLGLVLMIDIVHSHASTNTLDGLNMPD---GTDGHHYFHSRGRHMMWDSR 440
Db 323 LKYLVDKAHSLGLRLVMDVHSHASNVTDLNGYDVQGSTQESYFHAGDRGYHKLWDSR 382
Qy 441 LFNYSWEVLRLFLSNARWLDYKFDGFRDGVTSMMYTHGLQVDFGTGNYNEFGYAT 500
Db 383 LFNYSANWEVLRLFLSNLRYLWDEFMDFGFRDGVTSMLYHHHGINVGTGNYQYFSLDT 442
Qy 501 DVDAVYVLMMLNDMIHGLFPPEAVTIGEDVSGMPTVCIPVEDGGVGFYRLHMAVADKWVE 560
Db 443 AVDAVYVYMLANLHMKLLPEATVVAEDVSGMPVLCRPVDEGGVGFYRLAMALPDRWID 502
Qy 561 IIOKRDE-DWKMGDIIVHMLTNRRWLEKCVSAESHQDALVGDKTIAFLMDKMDYDFMAL 619
Db 503 YLKNKDDSEWSMGEIAHTLTNRRYTEKCIAYAESHDQSIGVDKTIAPLLMDKEMYTGMSD 562
Qy 620 DRPSTPLDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEDWDFPRGDLHLPSGKFPV 679
Db 563 LQPASPTIDRGALQKMIHFTMALGGDGYLNFMGNEFGHPEDWDFPR-----E 611
Qy 680 GNNYSYDKRRRFDLGNKSLRYHGMQEFDOAIOHLEAAYGFWTSEHOYISRKDERDRII 739
Db 612 GNNYSYDKCRQWSLVDTDLHRYKYNMAFDQAMNALDERFSLSSKQIVSDMNDDEKVI 671
Qy 740 VFERGNLVFVNFHWTSSYSDYRVGCLPKGKYKIVLSDSDPLFGGFGRLSHDAEHFSF-- 797
Db 672 VFERGDLVVFNFHFKPKTYEGYKVGCDLPGKYRVALDSDALVFGHGVRGVDHFTSPE 731
Qy 798 -----EGWYDNRPRSPFMYTTPCPTAVVYALVED 825
Db 732 GVPGPETNFRNRPNSFKVLSPPTCVAYRVDE 765

Qy	294	PEEBKYFANPOPKRPSLRIYESHVGHSSSTPVTINTYANFRDDVLPRIKKUGYNVQJLM	353
Db	202	PPSERIYHFKYPPRPKPAPRIYEAHVGHSSSPRVNSYREFADDVLPRIKANNYTVQJLM	261
Qy	354	AIQHSYFASGYHVNTNFYAASSRFGTDPDLKSLTDKAHELGLLVIMDITVHSHASTJLD	413
Db	262	AIMESYHSGYHVNTNFVANSRNYGNPEDLKSLTDKAHSLGQJLVLDVVVHSHANNVTD	321
Qy	414	GLNMFDP---GTDGHYFHSQPRGHHMMWDSRLFNYSWEVLRFLLSNARWMLDEYKFDGFR	470
Db	322	GLNGFDIQGGSQESYFHAGERYHKLWDSRLFNYSANWEVLRFLLSNLRWMLSEYNFDGFR	381
Qy	471	PDGVTSMYTHHGLQVDTGNVNEYFGYATDVDAVVYMLMNDMTHGLPPEAVTIGEDVS	530
Db	382	PDGITSMLYVHHGJNMGTGNVNEYFSEATDVDAVVYMLMANNLHKIIPPDATVIAEDVS	441
Qy	531	GMPTVCIPVEDGGVGFYRLHMAVADKVEIIQ-KREDEWKGMDIVHMLTNRWLEKCVS	589
Db	442	GMPLSRPVSBGJGDFYRLAWAIPDKWIDYJKNKNDEBDSWKVEYSSLTNRRYTEKCIA	501
Qy	590	YAESHDQALVGDKTIAFWLMDKMDYDFMALDRPSTPLDRGVALHKMIRLITWJGCGEY	649
Db	502	YAESHDQSIGDKTIAFWLLMKNKEMYSGMSCLTDASFPVDVAGIALDKMTHFFENGJLGRGV	561
Qy	650	LNFMG 654	
Db	562	POFHG 566	

```

RESULT 14
US-09-579-365-2
; Sequence 2, Application US/09579365
; Patent No. 6566585
; GENERAL INFORMATION:
; APPLICANT: Martin QUANZ
; TITLE OF INVENTION: GENETICALLY MODIFIED PLANT CELLS AND PLANTS WITH AN
; TITLE OF INVENTION: INCREASED ACTIVITY OF AN AMYLOSUCLASE PROTEIN AND A
; TITLE OF INVENTION: BRANCHING ENZYME
; FILE REFERENCE: 0147-0200P
; CURRENT APPLICATION NUMBER: US/09/579,365
; CURRENT FILING DATE: 2000-05-25
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 762
; TYPE: PRT
; ORGANISM: Neisseria denitrificans
US-09-579-365-2

```

Query Match	12.7%; Score 576; DB 4; Length 762;
Best Local Similarity	26.8%; Pred. No. 8.4e-47;
Matches	186; Conservative 108; Mismatches 223; Indels 178; Gaps 33

Qy	170	LREIDKVEGS-----LDAFSRG-----YKFGFSRSE---TCGTVREWAPGTAAAL	214
	:	:::::	:
Db	105	VREDDYRFSGALQHTDALLIGEGTHLRPYETLGAHFAEMDCVSGVRFAVPANRRYSV	164
	:	:	:
Qy	215	IGDFNNNNPNADV--TONECGWEIELPNNADGSPPIPHGSRVKIRMDTPSGNKDSIP	271
	:	: :: :	:
Db	165	IGFNGWDSRRHAMRPTGN--GLWDIFPG-----VGLN	197
	:	:	:
Qy	272	AWIKFSV-QAPGEL----PY-----NGIVDPPEBEKVFNQPQRPKS	311
	:	: :: :	:
Db	198	ALYFSLVDANGNIREKADPVAFGNELPPTASVVRLG---PAKEAFAFRRRANSVAP	254
	:	: :: :	:
Qy	312	LRIYESHVGMSSTEFPVIN---TYANFRDDLPRIKKLGYNVQLMAIOEHSYIASFGYHV	368
	:	: :: :	:
Db	255	ISIVEVHLGSMWRNPENNYMLTYQTDLAVLVYVKDMGFTHIELPLSEYPFDGSMGYQA	314
	:	: :: :	:
Qy	369	TNFVAASRFTCPDDLKSILDKAHELGLLLVMDIVHSHASTNTL DGLNMFCDTGTHYFHS	428
	:	: :: :	:
Db	315	TGLYAPT-SRFGSPDELKALIDAHAAGTSVLTDVWAGHFPTDD-HGLNTFDCT-ALYBHA	372
	:	: :: :	:

Qy 429 GPR-GHHWMDSRLENFYSGSVEVLRFPLSNARWLDEYKPDGFRDGVTSMMYTHHGLQVD 487
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 373 DPREGYHQDWNTLTYNFRNEVKNFLOGNALYTWERFGDGIRVDASMIYRYSRK-- 430
|| || : : : : || || : : : : || || : : : : || || : : : :
Qy 488 FTGNV---NEYFGYATDVAVYLMLLNDMIIHGLPEAVTIGEDSYSGMPTVCIPVEDGGVG 545
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 431 -DGEWIENRY- GGSENELEAIFLRQTNAVLKSETPGAGSFABESTSPADV---TREAGLN 485
|| || : : : : || || : : : : || || : : : : || || : : : :
Qy 546 FDYRLHMAVADKWYEI1IKQRDEDWKMGDI VHMILT N--RRWLEKCVSYAE-----SHDQA 597
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 486 FDPKNWGMMNDTLRYMQE-----DPVHRKHVHGKMTEFGMYQYSENFLPLSHDEV 537
|| || : : : : || || : : : : || || : : : : || || : : : :
Qy 598 LVGDKTIA-----FWLMXDKDM----YDFMALDRSTPLIDRGVALHKMIRILTMGLGSEG 648
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 538 VHGRKSLLKMKMPGDCWOQFANLAYRYGF-----YGFPGKK 573
|| || : : : : || || : : : : || || : : : : || || : : : :
Qy 649 YLNPWGNEFGH-PEWIDPPRG-DLHLPSGKFVPNGNYSYDKCRRRFDLGNSKHLRYHGMQ 706
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 574 LL-FMGNEFAQGREN-NYQEGLDWHL-----LDEAGGWH---KGVO 609
|| || : : : : || || : : : : || || : : : : || || : : : :
Qy 707 EFOQAIQHLEAY-----GFMSTSEHOYISRKDERRIIVFER-----GNLVVFVN 751
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 610 DYVRDLNHITAHAPLYOLOQQPEGF-----EWLVADDSDNSVFERRDRAGNR II VIS 664
|| || : : : : || || : : : : || || : : : : || || : : : :
Qy 752 FHWTSYSYDRVGLCKPKGYKIVLDSDDPLFGGFG 786
|| || : : : : || || : : : : || || : : : : || || : : : :
Db 665 NFTPVVREHYRVFNAPCRYTEILNSDRTOYQSSG 699
|| || : : : : || || : : : : || || : : : : || || : : : :

RESULT 15

US-09-537-120-2

; Sequence 2, Application US/09537120

; Patent No. 6608018

; GENERAL INFORMATION:

; APPLICANT: Shinohara, Mari L.

; APPLICANT: No. 6608018ozymes A/S

; TITLE OF INVENTION: Polypeptides having branching enzyme activity and nucleoside triphosphates

; TITLE OF INVENTION: same

; FILE REFERENCE: 5860.200-US

; CURRENT APPLICATION NUMBER: US/09/537,120

; CURRENT FILING DATE: 2001-08-17

; NUMBER OF SEQ ID NOS: 2

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 2

; LENGTH: 621

; TYPE: PRT

; ORGANISM: Rhodothermus obamensis

US-09-537-120-2

Query Match	12.5%; Score 570; DB 4; Length 621;
Best Local Similarity	25.9%; Pred. No. 2.3e-46;
Matches	187; Conservative 115; Mismatches 257; Indels 162; Gaps 29
Qy	172 BEIDKYEGSLDARSGYEKFGFSRSETGIYREWAPGATWAALIGDFNNWNPADVMQTQN 231
Db	7 EDIARRWESG--TFYDYSYRKLGAHPDDDEGTWFCVWAPHADGVSVLGAFNDMNPANPLERY 64
Qy	232 ECGWEIFLPNADGSPPIHGSRVKRTMDTPSGNKDSIPAWIKFSVQAPGELPNGI-- 289
Db	65 GGGLLWAGYVPGARPG-----HTYKYIRLHGFGYQADKTDPPYA---FAMEPTTGPSLEGUAS 116
Qy	290 -----YDPPBEEKYVFNKPNQPKPSL-----RIVESHVQ--MSSTEPVIN--TYANFR 335
Db	117 IITRLDYTHD-----DEWMRR-----KGPASLYEPVSIYEVHLGSWRHKRPCESSYRIA 169
Qy	336 DDVLPRILKLGYNAYQLMAIQEHSYYASFGYVHTNFYAASRRFGTDPDLKSLIDKAHELG 395
Db	170 EPLADYVQENGFTHVLLPVMHEPHYGSWGQVVGYYAPTFRYGSQDMLYLDLYLHQRG 229
Qy	396 LLVLMDIVHSHASTNTLDGLNMFDGTGCHTFHSGPRGHHMWDSRLFNYSGWELVRFLLS 455
Db	230 IGVILDWVPSGHFAADP--QGVLFFDGTTLFFYDDPKMYHPDOWGYTFVDPKPGYVNFILS 288

OM nucleic - nucleic search, using sw model
Run on: July 16, 2004, 19:45:05 ; Search time 1584 Seconds
(without alignments)
7970.882 Million cell updates/sec

Title: US-09-297-703c-28
Perfect score: 2588
Sequence: 1 ctctctaactctcaggaa.....attattgatctctctatgtt 2588

Scoring table: IDENTITY NUC
Gapop 10.0 , Gapext 1.0
Searched: 3190992 seqs, 2439311697 residues
Total number of hits satisfying chosen parameters: 6381984

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Listing first 45 summaries

Database : Published Applications NA:
1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq.*
2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq.*
3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq.*
4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq.*
5: /cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq.*
6: /cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq.*
7: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq.*
8: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq.*
9: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq.*
10: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq.*
11: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq.*
12: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq.*
13: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq.*
14: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq.*
15: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq.*
16: /cgn2_6/ptodata/2/pubpna/US10C_PUBCOMB.seq.*
17: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq.*
18: /cgn2_6/ptodata/2/pubpna/US50_NEW_PUB.seq.*
19: /cgn2_6/ptodata/2/pubpna/US50_PUBCOMB.seq.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1466	56.6	5164	13 US-10-424-599-130849	Sequence 130849,
2	1392.4	53.8	2418	9 US-09-938-842A-872	Sequence 872, App
3	1392.4	53.8	2418	11 US-09-938-842A-872	Sequence 872, App
4	1382.4	53.4	3074	15 US-10-254-534-1	Sequence 1, Appli
5	1381.8	53.4	2563	13 US-10-239-145-1	Sequence 1, Appli
6	1381.2	53.4	2578	15 US-10-056-454A-19	Sequence 19, Appl
7	1380	53.3	2529	15 US-10-056-454A-17	Sequence 17, Appl
8	1377.8	53.2	3231	15 US-10-056-454A-18	Sequence 16, Appl
9	1370.4	53.0	2576	15 US-10-056-454A-16	Sequence 16, Appl
10	1364	52.7	3033	15 US-10-056-454A-14	Sequence 14, Appl
11	1360.4	52.6	2577	9 US-09-938-842A-337	Sequence 337, App
12	1360.4	52.6	2577	11 US-09-938-842A-337	Sequence 337, App
13	1357.8	52.5	3003	15 US-10-056-454A-12	Sequence 12, Appl
14	1341.2	51.8	2975	15 US-10-056-454A-13	Sequence 13, Appl

15	1307.6	50.5	3119	17 US-10-437-963-11896	Sequence 11896, A
16	1292.6	49.9	3288	17 US-10-437-963-51674	Sequence 51674, A
17	1251.8	48.4	2640	13 US-10-336-753-55	Sequence 55, Appl
18	1250	48.3	2554	13 US-10-434-893A-1	Sequence 1, Appli
19	1230.2	47.5	2559	9 US-09-792-127-1	Sequence 1, Appli
20	1230.2	47.5	3039	9 US-09-792-127-3	Sequence 3, Appli
21	1215.8	47.0	2780	13 US-10-434-893A-2	Sequence 2, Appli
22	947.4	36.6	1393	15 US-10-254-534-3	Sequence 3, Appli
23	938.6	36.3	1642	16 US-10-260-238-1027	Sequence 1027, Ap
24	840.4	32.5	1867	13 US-10-425-114-8329	Sequence 8329, Ap
25	633.4	24.5	2763	13 US-10-336-753-57	Sequence 57, Appl
26	613	23.7	3036	17 US-10-437-963-67863	Sequence 67863, A
27	594.8	23.0	2913	13 US-10-235-192A-36	Sequence 36, Appl
28	594.8	23.0	2913	13 US-10-342-887-442	Sequence 442, App
29	594.8	23.0	2913	13 US-10-172-118-442	Sequence 442, App
30	594.8	23.0	2955	9 US-09-880-107-2148	Sequence 2148, Ap
31	594.8	23.0	2955	10 US-09-918-624B-30	Sequence 30, Appl
32	594.8	23.0	2994	15 US-10-084-817-92	Sequence 92, Appl
33	594.8	23.0	3075	15 US-10-240-965-135	Sequence 135, App
34	586.8	22.7	2324	13 US-10-425-114-32172	Sequence 32172, A
35	570.8	22.1	1255	15 US-10-171-008-3	Sequence 3, Appli
36	516.2	19.9	2958	13 US-10-262-511-107	Sequence 107, App
37	509	19.7	1641	15 US-10-171-008-7	Sequence 7, Appli
38	503.2	19.4	2443	16 US-10-397-954A-1	Sequence 1, Appli
39	493.4	19.1	3753	13 US-10-239-145-6	Sequence 6, Appli
40	460.4	17.8	1267	16 US-10-260-238-3480	Sequence 3480, Ap
41	409.6	15.8	2115	16 US-10-369-493-25407	Sequence 25407, A
42	403.2	15.6	1119	16 US-10-260-238-3410	Sequence 3410, Ap
43	378.4	14.6	7320	17 US-10-221-598B-6	Sequence 6, Appli
44	374.6	14.5	1941	16 US-10-369-493-33970	Sequence 33970, A
45	370.4	14.3	636	16 US-10-260-238-5563	Sequence 5563, Ap

ALIGNMENTS

RESULT 1

US-10-424-599-130849
; Sequence 130849, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 130849
; LENGTH: 5164
; TYPE: DNA
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_89164C.1
US-10-424-599-130849

Query Match	56.6%	Score	1466;	DB	13;	Length	5164;
Best Local Similarity	80.4%	Pred. No.	0;				
Matches	1729;	Conservative	0;	Mismatches	420;	Indels	1;
Gaps	1;						
Qy	347	TGTTGAAGATCGAATTAAGTAATCTGTTCCAAATCGGGAGACAGTTAGCATCAGAAA	406				
Db	769	TGTGAACATTCGCGCCCAAGAAAGCGTCGGTATCTGTTGGTAGGAATCAAGATAGTAAG	828				
Qy	407	AATTGGATCTAAACCAAGGTCCATTCCTCCACCGGAGAGGGCAAGAAATATATGACAT	466				
Db	829	TGATGAAGTTAAACCTTAAGT-CATTCCCCACCTGGCAGTGGACAGAAATATATGAGAT	887				
Qy	467	AGATCCCAAGCTTGACAGCGCTTCGTCAACACCTAGATTACCGGTATTACAGTACAAAAG	526				

Db 888 AGATCCATCTTTGTAGCTCACCGGTGACCATCTTGATTTCCGTTATGACAAATACAAAG 947
Qy 527 ACTCCGAGAGAAATGACAGTAGTAGAGGTAGTCTGATGCATTTCTCGTGGCTATGA 586
Db 948 ATTGTGTTATGAAATGACAGCATGAAAGCGGTCTGGATACATTTCTCGTGGTTATGA 1007
Qy 587 AAGTTTTGGTTTCTCAGCGAGTGAACAGGAATACCTTATAGAGAGTGGGCACAGGAGC 646
Db 1008 AAAATTTGGCTTCATACGAGGTGTACAGGCATTTACTTACAGAGNGTGGGCACCTGGAGC 1067
Qy 647 TACGTGGGCTGCATTTGATTTGGAGATTTCAATACTGGAAATCCTAATGAGATGTATGAC 706
Db 1068 TAAGTCAGCAGCATTAATTGGAGACTTCAACAATTTGGAAATCAAAATGAGATGTAATGAC 1127
Qy 707 TCAGAAATGAGTGTGTGTCTGGAGACTTTTGGCGAAATTAATGAGATGTTTCAACACC 766
Db 1128 CAGGAATGAATTTGGTGTGTGGAGACTTCTTGCCAAACAATGGGATGGTTTCAACACC 1187
Qy 767 AATTCGCCATGGTCTCGAGTAAAGATACGATGGATCTCCATCTGGCAACAAGATTTC 826
Db 1188 AATTCGCCATGGTCTCGGTCAAGATCGGATGATCTCCCTCTGGAATCAAGGACTC 1247
Qy 827 TATTCCTGCTGGATCAAGTTCTCAGTTCAAGCACAGGTGAATCCCATATAATGGCAT 886
Db 1248 AATTCCTGCTGGATTAAGTTTCTGTACAGGCTCCTGGTGAATTTCCATACAGCGGAAT 1307
Qy 887 ATACTATGATCTCCGAGGAGGAGAGTATGTGTTCAAAATCCTCAGCCAAAGAGACC 946
Db 1308 ATACTATGATCCCCAGAGAGGAAAAATATGTCTTCAAAATCCTCAGCCAAAGAGACC 1367
Qy 947 AAAATCACTTCGGATTTATGAGTCGACGTTTGGAAATGAGTAGTACGAGCCAGTAAATTA 1006
Db 1368 AAAATCACTTAGAATATATGATCACATCGGAATGAGCAGTCCGAGGCCAAAGATCAA 1427
Qy 1007 CACATATGCCAATTTAGAGATGATGTCTCTCGCATCAAAAAGCTTGGTCAATGC 1066
Db 1428 TACATATGTCAATTTTAGAGATGATGTACTGCTCGCATTAAGAGGCTTGGCTATAATGC 1487
Qy 1067 TGTTGAGTCTAGGCTATTCAGAGCATTCATATATGCTAGTTTGGTATCAGCTAC 1126
Db 1488 TGTCAGAAATATGGCTATCCAGAAACATTTTATATGCCAGCTTGGGTACCATGTTAC 1547
Qy 1127 AAATCTTTTATGAGCTAGCAGCCGATTTGGAATCCTGATGATTTAAAGTCTCTAAATAGA 1186
Db 1548 AAATTTCTTGACCTAGCAGCCGATTTGGAATCAGAGGAACTTAAGTCTCTGATAGA 1607
Qy 1187 TAAAGCTCACGAGTTAGTCTTCTGTTCTCATGGATATGTTTCATAGCCATGATCAAC 1246
Db 1608 CAGAGCCCATGAATCGGGTCTGCTTGTCTGATGGATATGTACACAGCCATGATCAAA 1667
Qy 1247 TAAATAGTTGGATGGCTGAATATGTTTGTATGGATGGATGTCATCTACTTCTACTCGG 1306
Db 1668 TAAATACATTTGGATGGCTGGAACATGTTTGTATGGAACTGAAGGTCAATTAATCTTCCATCTCGG 1727
Qy 1307 ACCAGGGGTCAATCATGGATGGGATCTCGCCCTTTTCAACTATGGGATCGGGAGGT 1366
Db 1728 GTCACAGGTTATCATTTGATGGATGGAATCTCGCCCTTTTAACTACGGAAGCTGGAGT 1787
Qy 1367 TCTAAGGTTTCTCTTTCAAAATGCAAGGTGGTGGTGGATGAGTACAAAGTTTGTATGGGTT 1426
Db 1788 TCTAAGGTTATCTACTTTGGAATGCAAGATGGTGGCTGGATGAATAACAAGTTTGTATGGAT 1847
Qy 1427 CAGATTTGATGGGTGACTTCAATGATGTACACCATCATGATTTGCAAGGTAGATTTTAC 1486
Db 1848 TCGATTTGATGGGTGTACATCAATGATGATACACTCATGATGATTTGGAGGTAGCATTTTAC 1907
Qy 1487 CGGCAACTACATGAATCTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
Db 1908 TGGAAATACATGATGATTTTGGTTTGGCAACTGATGTGATGCTGTGATTTACCTGAT 1967
Qy 1547 GCTGTTGAATGATATGATTCATGCTCTCTCCAGAGGCTGTCAACATTTGGTGAAGATGT 1606
Db 1968 GCTGACTAATGATGTCAATTCATGGGCTGTCTCCCTGAGGCTGTTAACAATTTGGTGAAGATGT 2027

Qy 1607 TAGTGGAAATGCCAAGTTTTCGATTTTCGGTTGAAGATGGTGGTGTGCTTTGCTTTGATTTACG 1666
Db 2028 GAGTGGAAATGCCAAGTTTTCGCTTCTCTACGAAGATGGTGGGTTGGCTTTGATTTACG 2087
Qy 1667 TCTCCACATCGCTGTGCTGATAAATGGGTGAGATTTATTCAGAAGAGAGATGAAGATTG 1726
Db 2088 CCTGCACATGCCCATTGACAGCAAGTGTGAGATTTCTCAAGAAGAAATGATGAAGACTG 2147
Qy 1727 GAAAATGGGTGACATTTGTATGCTGACCAACAGCGCGTGGTTGGAAGAAAGTGTGTTTC 1786
Db 2148 GAAAATGGGTGATATTTGTCACACATTTAAACAAACAGAGGTGGCTGGAAGAAATGTGTAGC 2207
Qy 1787 TTATGCTGAAAGTGCATGACCAAGCCCTTGTGTTGGTGCACAAATATTTCATTTTGGCTGAT 1846
Db 2207 TTATGCTGAAAGTGCATGACCAAGCCCTTGTGTTGGTGCACAAATATTTCATTTTGGTGTAT 2267
Qy 1847 GGAACAGGATATGATGACTTTCATGCTTTCATGACACCACTCTA CTCTCTCATAGATCG 1906
Db 2268 GGAACAGGATATGATGACTTTCATGCTTTCATGCTTTCATGACACCACTCATATATAGATCG 2327
Qy 1907 TGGATGACATTTGCACAAAATGATCAGGCTTATTTACCATGGGATTAGCCGAGAGAGATA 1966
Db 2328 TGGTATAGCGTTGCAAAAATGATTAGGCTTATTTACCATGGGCTTTCGTTGGTGAAGGATA 2387
Qy 1967 TTTGAATTTTATGGAAATGAATTTTGGACACCCCGAGTGGATTTGATTTTCCAAGAGGTGA 2026
Db 2388 TTTAAATTTTATGGGAAATGAATTTGGCCATCTCTGAGTGGATTTTCCNAGGGGTGA 2447
Qy 2027 TCTACATCTTCCAGTGGTAAATTTGTTCTCGGAAACAATTTACAGTTATGATAAATGCCG 2086
Db 2448 TCAACATCTTCTACTGGCGTAATAGTTCCAGGGAATAACAACAGATTTTGTATAAATGCAG 2507
Qy 2087 GCGTAGTGTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146
Db 2508 GCGTAGATTTGACTTGGGTGATCGGACTATCTAAGATATCGAGGGGATGCAAGAAATTTGA 2567
Qy 2147 TCAAGCAATTTCAAGATCTTGAAGAAGCTATGTTTTCATGACTTCTGAGCACCAATACAT 2206
Db 2568 TCAGGCCATCGAGCATCTAGAGAAAGTTTGGTTTCATGACTCTGAGCACCAATATAT 2627
Qy 2207 ATCAGGAAGGATGAAGGATCGGATCATGTCTTCGAGAGGGGAAACCTCGTTTGTGT 2266
Db 2628 TCCAGGAAAAATGAAGGTGACAAAATATAGTCTTCGAAAGGGGCAACCTCATCTTTGT 2687
Qy 2267 ATTCAATTTTCAATTTGAGTACGACTTATCCGATACCGAGTTGGCTTAAAGCCAGG 2326
Db 2688 CTTCAATTTTCAATTTGGAACCAACAGCTATTCAGATTCAGAGTTGGCTGTTCAACCCCTGG 2747
Qy 2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCTTTTCTTTGGAGGCTTTTGGCAGGCTTAG 2386
Db 2748 GAAATATAAGATTTGCTTTGGATTCAGATGATGCTTTGTTGCTGGTCTTCAGTCGGCTCAA 2807
Qy 2387 TCATGATGCAGAGCATCTCAGCTTTTGAAGGGTGGTGCAGATAACCGGCTCGATCCTTCAT 2446
Db 2808 TCACACTGCTGAGTACTTCACTCAGAAAGGATGGTATGATGATGACCGACCTCGATCCTTTCT 2867
Qy 2447 GGTGTACACACCATGTAGAACACGAGTGTCTATGCTTTTATGAGGAGATG 2496
Db 2868 TATCTATGCACCTTCTAGAACAGCAGTGGTTTATGTCCTTTCAGATGATG 2917

RESULT 2

US-09-938-842A-872
; Sequence 872, Application US/09938842A

; Patent No. US20020160378A1

; GENERAL INFORMATION:

; APPLICANT: Harper, Jeff

; APPLICANT: Krepis, Joel

; APPLICANT: Wang, Xun

; APPLICANT: Zhu, Tong

; TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING

; TITLE OF INVENTION: SAME, AND METHODS OF USE

; FILE REFERENCE: SRIPI300-3									
; CURRENT APPLICATION NUMBER: US/09/938,842A									
; PRIOR FILING DATE: 2001-08-24									
; PRIOR APPLICATION NUMBER: US 60/227,866									
; PRIOR FILING DATE: 2000-08-24									
; PRIOR APPLICATION NUMBER: US 60/264,647									
; PRIOR FILING DATE: 2001-01-16									
; PRIOR APPLICATION NUMBER: US 60/300,111									
; PRIOR FILING DATE: 2001-06-22									
; NUMBER OF SEQ ID NOS: 5379									
; SEQ ID NO 872									
; LENGTH: 2418									
; TYPE: DNA									
; ORGANISM: Arabidopsis thaliana									
US-09-938-842A-872									
Query Match 53.8%; Score 1392.4; DB 9; Length 2418;									
Best Local Similarity 79.0%; Pred. No. 0;									
Matches 1657; Conservative 0; Mismatches 441; Indels 0; Gaps 0;									
QY	400	TCAGAAAAATGGATCTAAACCAAGTCCATTCTCCACCCGGCAGAGCGCAAGAATAT	459						
DB	317	TCAGAGAGAGGGGTGAACCAAGATAGTTCCTCCACCCGGGTGATGCGAAGAAATTT	376						
QY	460	ATGACATAGATCCAAAGCTTTGACAGCTTTTCGTCAACACCTAGATTACCGGTATTACAGAT	519						
DB	377	ATGAGATAGACCCCATGTTACGAACCTTACAACATCATCTTGATTACCGTTATGGACAGT	436						
QY	520	ACAAAGACTCGGAGAGAAATTTGAAGATATGAAGAGTAGTGAAGAGTCTGATGCATTTCTCGTG	579						
DB	437	ATAAAGAGATTGGCTGAGGAAATAGACAAGATATGAGGGTGGCTTTGAGGCATCTCTCGTG	496						
QY	580	GCTATGAAAGTTTGGTTCTCACCCAGTGAACAGAGAAATTAATTTATAGAGAGTGGGCAC	639						
DB	497	GCTATGAAAGTTTAGGATTTTCGCCAGTATGATGCGGTATTAATTTATAGAGAGTGGGCAC	556						
QY	640	CAGAGACTACGGGGCTGCATTGATTGGAGATTTCATTAACCTGGAATCCTTAATGCAGATG	699						
DB	557	CTGGAGCTAAGGCTGCATCACTTATCGGAGATTTCACCACTGGAAATTTCTAATGCAGATA	616						
QY	700	TCATGACTCAGATGAGTGTGTCTCGGAGATCTTTTTCGGAATTAATGCAGATGTTT	759						
DB	617	TCATGACTCGGAATGAATTTGGTGTTCGGAGATCTTTTTCGCCCAACCACTGATGGTT	676						
QY	760	CACCACCAATTCCTCGATGTTCTCGAGTAAAGATACGATGATCACTCCATCTCGCAACA	819						
DB	677	CGCTGCAATTCCTCATGGCTCACGTGTAAGATTCGTATGGATCACTCCATCTGGCATTA	736						
QY	820	AAGATTCTATTCTCTGGATCAAGTTCTCAGTTCAAGCAACGAGTGAACTCCCATATA	879						
DB	737	AAGACTCAATTCCTGTTGGATCAAGTTCTCGGTGCAAGCTCCAGTGAATCCCATCA	796						
QY	880	ATGGCATATACATGATCTCCGAGGAGGAGAGTATGTGTTCAAAAATCTCTAGCCAA	939						
DB	797	ATGGCATATACATGATCTCCGAGGAGGAGAGTATGTATTCAAACATCTCTCAACCA	856						
QY	940	AGAGACCAAAATCACTTCGGATTTATGATCCACGTTGGATGATGATGATGATGATGATG	999						
DB	857	AGAGACCTTAAGTCGTAAGGATTTATGAAGACACATGTTGGCATGATGATGATGATGAT	916						
QY	1000	TAAATTAACACATATGCCAATTTAGAGATGATGTCCTCCGATCAAAAAGCTTTGGCT	1059						
DB	917	TGGTCAATACGTATGCTAACTTTAGAGATGATGTTCTTCCCGCATCAAAAAGCTTTGGAT	976						
QY	1060	ACAATGCTGTTACGTATGCTAATTTCAAGAGCATTCATATATGCTAGTTTGGGTATC	1119						
DB	977	ATAATGCTGTTCAAAATTAATGGCCATACAAAGACATTCATATATGCCAGCTTTGGGTACC	1036						
QY	1120	ACGTACAAAATTTTATGACGTACGCGGATTTTGAACCTTCTGATGATTTAAGTCTC	1179						
DB	1037	ATGTCACAAACTTTTTTGGCCCAAGAGTGCCTGTGGGACCCCGAGGAACTAAATACAC	1096						
QY	1180	TAAATAGATAAAGCTCACGAGTTAGGTCTTCTGTTCTCATGGATATTGTTTCATAGCCATG	1239						

Db 2177 TCTTTGCTTTAACTTTTCACTGGACGACGACTCTTTGATTACCGCATTTGGTTGCTCCA 2236
Qy 2320 AGCCAGGAAAGTACAGATAGTCTTGGATTGAGATGATCCCTTTTGGAGGCTTTGGCA 2379
Db 2237 AGCCTGGAAATATAAGATCGTATTGGACTCGGACGATCCCTCTCTTTGGTGGATTCAATA 2296
Qy 2380 GGCTTAGTTCATGATCGAGACACTTCAGCTTTTGAAGGGTGTACGATAACCGGCTCGAT 2439
Db 2297 GGCTCGATCGAAGCAGAGTACTTCACTTATGATGGCTTATACGACGAACGACCTGCT 2356
Qy 2440 CTTTCATCGGTGACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGAGGATGA 2497
Db 2357 CTTTCATGGTCTATGACCGGTGTAGAACCGCGGTGTTTATGCTTTTAGCAAAACACGA 2414

RESULT 3
US-09-938-842A-872
; Sequence 872, Application US/09938842A
; Publication No. US20040009476A9
; GENERAL INFORMATION:
; APPLICANT: Harper, Jeff
; APPLICANT: Kreps, Joel
; APPLICANT: Wang, Xun
; APPLICANT: Zhu, Tong
; TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
; FILE REFERENCE: SCRIPI300-3
; CURRENT APPLICATION NUMBER: US/09/938,842A
; CURRENT FILING DATE: 2001-08-24
; PRIOR APPLICATION NUMBER: US 60/227,866
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: US 60/264,647
; PRIOR FILING DATE: 2001-01-16
; PRIOR APPLICATION NUMBER: US 60/300,111
; PRIOR FILING DATE: 2001-06-22
; NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 872
; LENGTH: 2418
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-938-842A-872

Query Match 53.8%; Score 1392.4; DB 11; Length 2418;
Best Local Similarity 79.0%; Pred. No. 0;
Matches 1657; Conservative 0; Mismatches 441; Indels 0; Gaps 0;

Qy 400 TCAGAAAAATTTGGATCTAAACAAGGTCCATTCTCCACCCGCGCAGAGGGCAAGATAT 459
Db 317 TCAAGGAGAGGGGTGAAACCAAGATAGTTCCCCACCGGGTGATGGCAAGAAAAATTT 376
Qy 460 ATGACATAGATCCAGCTTGACAGGCTTTCGTCACACCTAGATTACCGGTATTACAGT 519
Db 377 ATGAGATAGACCCCATGTTTACGAATTAACAATCATCTTTGATTACCGTTATGGACAGT 436
Qy 520 ACAAAAGACTCCGAGAAGAAATTCACAAGTATGAAGGTAGTCTGGATGCAATTTTCTCGTG 579
Db 437 ATAAAGATTCGCTGAGGAAATAGACAGTATGAGGGTGGTCTTGAGGCAATCTCTCGTG 496
Qy 580 GCTATGAAAAGTTGGTTTCTCA CGCAGTGAACAGGAATTAACATTATAGAGAGTGGGCAC 639
Db 497 GCTATGAAAAGTTAGGATTTTTCGCGCAGTGTATGCGGTATAACTTATAGAGAGTGGGCGC 556
Qy 640 CAGGAGCTACGTGGGCTCANTTGTGAGATTTCAATAACTGGAACTCTTAATCAGATG 699
Db 557 CTGGAGCTTAAGGCTGCATCACTTATCGGAGATTTTCAACACTGGAAATCTTAATGAGATA 616
Qy 700 TCATCACTCAGAAATGAGTGTGTCTGGGAGATCTTTTTCGCGAGATCTTTTTCGCGAGATG 759
Db 617 TCATCACTCGGAATGAATTTGGTGTGGGAGATCTTTTTCGCGAGATCTTTTTCGCGAGATG 676
Qy 760 CACCAACCAATTTCCCATGGTCTCGAGTAAAGATAGGATGATCTCCATCTGCGACACA 819
Db 677 GCGCTGCAATTTCTCATGGCTCACGTGTAAAGATTCGTATGGATACTCCATCTGGCATTA 736

Qy 820 AAGATTCATATTTCTGCTTGGATCAAGTTCTCAGTTCAAGCACGAGGTGAATCTCCCATATA 879
Db 737 AAGACTCAATTCCTGCTTGGATCAAGTTCTCGGTGCAAGCTCCAGGTGAATCCCATTTCA 796
Qy 880 ATGGCATATATGATTCCTCCGAGGAGGAGAGTATGTTTCAAAAATCTCTCAGCCAA 939
Db 797 ATGGCATATATGATTCCTCCAGAGAGGAGAGTATGTTTCAAAACATCTCTCAACCAA 856
Qy 940 AGAGACCAAAATCACITTCGGATTTATGAGTCGACGCTTGAATGAGTAGTACGGAGCCAG 999
Db 857 AGAGACCTTAAGTCGCTAAGGATTTATGAAGCACAATGTTGGCATGAGTAGCAGGAAACAA 916
Qy 1000 TAATTAACACATATGCCAATTTTAGAGATGATGCTTCTCGCATCAAAAAGCTTCGGCT 1059
Db 917 TGGTCAATACGATGCTAACTTTTAGAGATGATGTTCTTCCCGCATCAAAAAGCTTGAT 976
Qy 1060 ACAATGCTGTTTCAGCTCATGGCTATTCAAGAGCATTCATATATGCTAGTATTTGGGTATC 1119
Db 977 ATAAATGCTGTTTCAAAATTTATGCCCATACAAGAACATTCATATATATGCCAGCTTTGGGTACC 1036
Qy 1120 ACCTCACAAACTTTTATGCGAGCTTAGCAGCCGATTTGGAATCTCTGATGATTTAAAGTCTC 1179
Db 1037 ATGTCAAAAATCTTTTGGCCCCAAGCAGTCCGCTGGGAGCCCGCAGAGGAACTAAAATCAC 1096
Qy 1180 TAATAGATAAAGCTCACGAGTTAGGCTCTTCTGTTCTCATGGATATTTGTTCATAGCCATG 1239
Db 1097 TGATAGATAGCTCAGGAGTTAGGCTTGGTAGTCTCTGATGGATATGCTTTCATAGCCATG 1156
Qy 1240 CATCAACATAATACGTTGGATGGCTGAATATGTTTGAATGATCGGATGCTCACTATTTTC 1299
Db 1157 CTTCAAAAACACATTTGGATGGACTGAACATGTTTGAATGGAACCTGACTCACTATTTTC 1216
Qy 1300 ACTCTGACCAACCGGGTCACTATTGGATGTTGGGACTCTCGCTTTTCAACTATGGGAGCT 1359
Db 1217 ACTCTGACCTCGGGGATACCATTTGGATGTTGGGATTCACGACTTTTCAATTTATGGGAGCT 1276
Qy 1360 GGGAGGTTCTAAGGTTTCTTTTCAAAATCAAGGTGGTGGTTGGATGAGTACAAAGTTTG 1419
Db 1277 GGGAGGTTATACGATATCTCTTTCAAAATGACGGTGGTGGCTAGAGAAATACAAGTTTG 1336
Qy 1420 ATGGGTTTCAGATTTGATGGGCTGACTTCAATGATGTACACCCATCATGGATGGATGAGTAG 1479
Db 1337 ATGGATTTAGATTTGATGGTGTAAACCTCAATGATGTATATCTCATGAGGACTCTCGGTTG 1396
Qy 1480 ATTTTACCGCAACTACAATGAATACCTTTCGATATGCAACTGATGTAGATGCTGTGTTT 1539
Db 1397 GATTTACTGGGAACCTACCCGAATACCTTTGGATTTGGAACCTGATGTGATGCTGTGAAT 1456
Qy 1540 ATTTGATGCTGTTGAATGATATGATTCATGGTCTCTTTCCAGAGGCTGTCAACCATTTGGTG 1599
Db 1457 ATCTCATGCTGGTTAATGATATGATTCATGGGCTCTACCTGAAAGCATTTACCGTTGGTG 1516
Qy 1600 AAGATTTAGTGAATGCCAACAGTTTGCATTCGGTTTGAAGATGGTGGTGTGGCTTTG 1659
Db 1517 AAGATTTAGTGGTATGCCAACATCTCTGTATTTCTGTCTCAAGATGGTGGGCTTTGGATTTG 1576
Qy 1660 ATTATCGTCTCCACATGCTGTTGCTGATAAATGGGTTGAGATTTATTTCAGAAGAGAGATG 1719
Db 1577 ACTACCGTTTACATAGCCCATAGCTGATAGTGGATAGAAATGCTCAAGAGAGAGATG 1636
Qy 1720 AAGATTCGAAAATGGGTGACATTTGTACATATGCTGACCAACAGCGGCTGGTTGGAAAGT 1779
Db 1637 AAGACTGCGAAATGGGCGACATCATTTTACACACTTACCAACAGAAGGTGGTCAGAGAAGT 1696
Qy 1780 GTGTTTCTTATGCTGAAAAGTCATGACGAGCCCTTGTGTGTGACAAAATCTATTGCAATTT 1839
Db 1697 GTATCTCTTATGCTGAAAAGTCACGATCAAGCTCTTGTGTGTGATAAAAACAAATTCCTTCT 1756
Qy 1840 GGCTGATGGACAAGATATGATGACTTTCATGGCTCTTGAACAGACCATCTACTCTCTCA 1899
Db 1757 GGTAAATGGACAAGATATGATGATTTTCAATGGCAGTAGACAGACCATCAACTCTCTTA 1816

Qy	1900	TAGATCGTGGAGTAGCATTCGACAAAATGATCAGCGCTTATTACCATGGGATTAGCGCGAG	1959
Db	1817	TCGATAGAGGAATAGCTTTGACAAAAATGATTAGGCTTATAACTATCGGATTAGCGCGTG	1876
Qy	1960	AAGGATATTTCGAATTTTATGGAAATGAAATTTGACACCCCGAGTGGATGATTTTCCAA	2019
Db	1877	AAGGTTACTTAAATTTTATGGAAAAAGAAATTCGGACATCCAGAAATGGAATGATTTTCCCA	1936
Qy	2020	GAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTTCTCTGGGAAACAAATTCAGTTTATGATA	2079
Db	1937	GAGCGGAGCAGCGCTTTCTCGATGATGGTAGGTTCTCTGGCAACAATTCAGTTTATGACA	1996
Qy	2080	AATCCCGCGTAGGTTTGATCTTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAG	2139
Db	1997	AATCCCGCGCAGATTTGATCTTGGGGATGCAGATTATCTCAGATACCGGGACTACAAG	2056
Qy	2140	AGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTTCATGCACTTCTGAGCACC	2199
Db	2057	AATTTGATCAGGCAATGCAACATCTTGAAGAAATACGGTTTATTGACATTCGGAGCACC	2116
Qy	2200	AATACATATCA CGGAAGGATGAAAGGGATCGGATCATTTGTTCTCGAGAGGGGAAACCTCG	2259
Db	2117	AATTCATATCAGAAAGACGACGACATAGAGTAATCGTATTTCGAAAGAGGTGATCTCG	2176
Qy	2260	TTTTTGTAATCAATTTTCATTTGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAA	2319
Db	2177	TCTTTGCTTTAACTTTCACTGGACCAGCAGCTACTTTGATTACCGCATTTGGTTGCTCCA	2236
Qy	2320	AGCCAGGAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTTGTTTGGAGGCTTTGGCA	2379
Db	2237	AGCCTGAAAATAAAGATCGATTTGGA CTGGACGATCCTCTCTTTTGGTGGATTTCAATA	2296
Qy	2380	GGCTTAGTCATGATGCAGAGCACTTCAGCTTTGAAGGAGTGATACGATAAACCGGCTCGAT	2439
Db	2297	GGCTCGATTCGCAAGCGCAGTACTTCACTTAATGATGGCTTATACGACGAACGACCTTGCT	2356
Qy	2440	CTTTCATGGTGTATACACCACTGTAGAAACAGCAGTGGTCTATGCTTTTATGTCGAGGATGA	2497
Db	2357	CTTTCATGGTCTATGCAACCGGTGTAGAAACCGCCGTGGTTTATGCTTTTATGACAAACCA	2414

RESULT 4

```

US/10-254-534-1
; Sequence 1, Application US/10254534
; Publication No. US20030046730A1
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/10/254,534
; CURRENT FILING DATE: 2002-09-26
; PRIOR APPLICATION NUMBER: US/03/087,277
; PRIOR FILING DATE: 1998-05-29
; PRIOR APPLICATION NUMBER: PCT/SE96/01558
; PRIOR FILING DATE: 1996-11-28
; PRIOR APPLICATION NUMBER: SE 9504272-7
; PRIOR FILING DATE: 1995-11-29
; PRIOR APPLICATION NUMBER: SE 9601506-0
; PRIOR FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 3074
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: bell gene
; OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
; OTHER INFORMATION: (potato)

```

```
QY      827 TATTCTCTGGATCAAGTTCTCAGTTCAGGCCAGGTGAATCCCATATAATGGCAT 886
DB      1097 CATTCCTCTGGATCAACTACTCTTTACAGCTTCCTGATGAATTCATATAATGGAT 1156
QY      887 ATACTATGATCCTCCGAGGAGGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
DB      1157 ATATTATGATCCACCAGGAGGAGAGGTATATCTTCCAAACCCACGCCCAAGAAACC 1216
QY      947 AAAATCACTTCGGATTTATGAGTCGCACGTTTGGAAATGAGTAGTACGGAGCCAGTAATTAA 1006
DB      1217 AAAAGTCGTGAGAATATATGAATCTCATATTTGGAATGAGTAGTACGGAGCCCTAAAAATTAA 1276
QY      1007 CACATATCCCAACTTTACAGATGATGCTTCTCGCATCAAAAGCTTGGCTCAATGC 1066
DB      1277 CTCATACGTGAATTTTTAGAGATGAAGTTCTTCTCGCATAAAAAGCTTGGGTACAATGC 1336
QY      1067 TGTTCAAGCTCATGGCTATTCAAGAGCATTCATATTTATGCTAGTTTGGGTATCAGCTCAC 1126
DB      1337 GGTCAAAATTTATGGCTATTCAAGAGCATTCATTATGCTAGTTTGGTTATCATGTAC 1396
QY      1127 AAACCTTTATGAGCTAGCAGCCGATTTGGAATCTCCTGATGATTTAAAGTCTCTAATAGA 1186
DB      1397 AAATTTTTTNGCACCAGCAGCCGTTTGGAAACNCCGACGACCTTAAAGTCTTTGATTTGA 1456
QY      1187 TAAAGCTCAGAGTTAGGCTCTTCTGTTCTCATGGAATTTGTTTATAGCCATGATCAAC 1246
DB      1457 TAAAGCTCATGAGCTAGGAATTTGTTGTTCTCATGAGCAATTTGTTTACAGCCCATGATCAA 1516
QY      1247 TAAATACGTTGGATGGCTCAATATGTTTGAATGGTACGGATGGTCACTACTTTCACTCTGG 1306
DB      1517 TAATACTTTAGATGACTGAACATGTTTGAAGCAGACAGATGTTGTTACTTTCACTCTGG 1576
QY      1307 ACCACGGGTCATCATGATGATGGAATCTCTGCTCTTTTCAACTATGAGGAGCTGGAGGT 1366
DB      1577 AGCTCGTGGTTATCATGATGATGGAATCTCGGCTCTTTAACTATGAGAACTCGGAGGT 1636
QY      1367 TCTAAGGTTCTCTCTTCAATGCAAGGTGGTGGTGGATGAGTACAGTACAAGTTTGAATGGTT 1426
DB      1637 ACTTAGGATCTCTCTCAATGCAAGATGGTGGTGGATGAGTCAAAATTTGATGGATTT 1696
QY      1427 CAGATTTGATGGGTGACTTCAATGATGTACACCCATCATGATGATGAGTATGAGTATTTAC 1486
DB      1697 TAGATTTGATGGTGGATCAATGATGTATGATGATCAACCGGATTTATCGGTGGATTCAC 1756
QY      1487 CGGCAACTACAATGAATCTTTGGATATGCAACTGATGATGATGCTGTGGTTTATTGAT 1546
DB      1757 TGGGAACTACGAGGAATCTTTGGACTCGCAACTGATGATGATGCTGTGTGATCTGAT 1816
QY      1547 GCTGTTGATGATGATGATGATGATGCTCTTCCAGAGGCTGTCACTTTGGTGAAGATGT 1606
DB      1817 GCTGTTCAACGATCTATTTCATGGGCTTTTCCAGATCAATACCATTTGGTGAAGATGT 1876
QY      1607 TAGTGGAAATGCCAACAGTTTGATTTCCGGTTGAAGATGGTGGTGTGGCTTTGATATTCG 1666
DB      1877 TAGCGGAATGCCGACATTTTATTTCCGTTCAAGATCGGGGTGTGGCTTTGACTATCG 1936
QY      1667 TCTCAGATGGCTGTGCTGATTAATGGTGGTGGATTTATTCAGAGAGAGATGAAGATTG 1726
DB      1937 GCTGCATATGGCAATTTGCTGATTAATGGATTTGATTTGCTCAAGAAACCGGATGAGGATTG 1996
QY      1727 GAAATGGGTGACATTTGATATGATCTGACCAACAGCGGTGGTTGGAAAAAGTGTGTTTC 1786
DB      1997 GAGATGGGTGATTTGTTTATACATCACTGACAAATAGAAGATGGTCGAAAAAGTGTGTTTC 2056
QY      1787 TTATGCTGAAAGTCAATGACAGGCTCTTTGTTGGTGAACAAACTATTTGCAATTTGGCTGAT 1846
DB      2057 ATACCTGAAAGTCATGATCAAGCTCTAGTCGTTGATTAATAAATATAGCATTTCTGGCTGAT 2116
QY      1847 GGACAGAGATATGATGATCTCATGGCTCTTGAAGACCATCTACTCTCTCATAGATCG 1906
DB      2117 GGAGAGAGATATGATGATTTTATGGCTCTGGATAGACCCNTCAACATCATTAATAGATCG 2176
```

```
QY      1907 TGGAGTAGCATTCGCAAAAATGATCAGGCTTTATTACCATGGGATTTAGCGGAGAGAGATA 1966
DB      2177 TGGATAGCATTCGCAAGATGATAGGCTTTGTAACCTATGGGATTTAGGAGAGAGAGGTA 2236
QY      1967 TTTGAATTTTATGGGAAATGAATTTGGACAACCCGAGTGGATTTGATTTTCCAGAGGTGA 2026
DB      2237 CCTAAATTTTATGGGAAATGAATTTGGCCACCCCTGAGTGGATTTGATTTCCCTAGGGCTGA 2296
QY      2027 TCTACATCTTCCAGTGGTAAATTTGTTCTCTGGGAACAATACAGTTTATCATATAAATCCCG 2086
DB      2297 ACAACACCTCTCTGATGGCTCAGTAATTTCCGGAAACCAATTCAGTTTATGATTAATTCAG 2356
QY      2087 GCCTAGGTTTGTATCTAGGCAATTTCAAGCATCTGAGATATCATGGATTCGAAGAGTTTGA 2146
DB      2357 ACGAGATTTGACCTGGGAGATGCAGAAATATTTAAGATACCGTGGGTGGAAGAATTTGA 2416
QY      2147 TCAAGCAATTCAGCATCTTGAAGAGCCTATGTTTTCATGACTTCTGAGCACCAATACAT 2206
DB      2417 CCGGGCTATGCAATCTTGAAGATAAATATGATTTTATGACTTCAGAACACCAAGTTTCAAT 2476
QY      2207 ATCAGGAAGGATCAAGGATCGGATCAATTTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266
DB      2477 ATCAGGAAGGATGAAGAGATAGGATGATTTGATTTTGAAGAAAGAAACCTAGTTTTTGT 2536
QY      2267 ATTCAATTTTCAATGGAGTACGAGCTATTCCGATTTACCGAGTTGGCTGTCTTAAAGCCAGG 2326
DB      2537 CTTTAAATTTCACTGGACAAAAGCTATTTCAGACTATCGCATAGGCTGCCTGAAGCCTGG 2596
QY      2327 AAAGTACAAGATAGTCTTGAATTCAGATGATCCTTTGTTGGAGGCTTTGGCAGGCTTAG 2386
DB      2597 AAAATACAAGGTTCCCTTGGACTCAGATGATCCACTTTTTTGGTGGCTTCGGGAGAAATGA 2656
QY      2387 TCATGATGCAGACACTTTCAGCTTTGAAGGCTGTACGATAAACCGGCTCGATCCTTCAT 2446
DB      2657 TCATAATGCCGAATTTTTCACCTTTGAAGGATGGATGATGATGCTCCTCTTCAATATAT 2716
QY      2447 GGTGTACACACCATGTAGAACACAGCAGTGTCTATGCTTTTATGAGGAGATGAAGTGGAGAA 2506
DB      2717 GGTGTATGCACCTAGTAGAACACAGCAGTGGTCTATGCACTAGTAGAACAAAGAGAAGA 2776
QY      2507 TGAATGGAACTGTGCGCCGGTTAAGATATATCTTTAAACAACAGG 2550
DB      2777 AGAAGAAGAAGTAGCAGTAGTAGAAGAAGTAGTAGTAGAAGAAG 2820
```

RESULT 5

```
US-10-239-145-1
; Sequence 1, Application US/10239145
; Publication No. US20040068766A1
; GENERAL INFORMATION:
; APPLICANT: Danisco A/S
; TITLE OF INVENTION: Enzyme
; FILE REFERENCE: p8156.wo
; CURRENT APPLICATION NUMBER: US/10/239,145
; CURRENT FILING DATE: 2002-09-20
; PRIOR APPLICATION NUMBER: GB 0006733.0
; PRIOR FILING DATE: 2000-03-20
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 2563
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: SBEII cdna
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (3)..(2549)
US-10-239-145-1
```

Query Match 53.4%; Score 1381.8; DB 13; Length 2563;
Best Local Similarity 77.0%; Pred. No. 0;
Matches 1683; Conservative 0; Mismatches 502; Indels 0; Gaps 0;

Db 2525 AGAAGTACAGTGTAGTAGAAGAA 2549

RESULT 6
US-10-056-454A-19
; Sequence 19, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Uniquest Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/056,454A
; FILING DATE: 25-Jun-2002
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2578 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; SEQUENCE DESCRIPTION: SEQ ID NO: 19:
US-10-056-454A-19

Query Match 53.4%; Score 1381.2; DB 15; Length 2578;
Best Local Similarity 77.3%; Pred. No. 0;
Matches 1677; Conservative 0; Mismatches 493; Indels 0; Gaps 0;

Qy 347 TGTGAAAGATGAAGTAAATAAGAAATCTGTTCCAAATGCGGGAGACAGTTAGCATCAGAAA 406
Db 350 TGGTAAACTGGAGGAGTCTAAACACATTAATACTCTGAAGAGACAAATATTGATGAATC 409
Qy 407 AATTGGATCTAAACCAAGTCCATCTCCACCGGACAGAGGCAAGAAATATATGAT 466
Db 410 TGATAGGATCAGAGAGGGGCACTCCCTCCACCTGGACTTGGTCAGAAAGATTTATGAAT 469
Qy 467 AGATCCAAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
Db 470 AGACCCCTTTTGACAAACTATGTCACACCTTGATTACAGGTATTCACAGTACAGAA 529
Qy 527 ACTCGAGAGAAATGTACAAGTATGAAGGTAGTCTGGATGCAATTTCTCGTGGCTATGA 586
Db 530 ACTGAGGAGGCAATGTACAAGTATGAGGGTGTGGAAAGCTTTCTCGTGGTATGA 589
Qy 587 AAAGTTGGTTCTCACCGCTGAACAGGAAATTAATATAGAGTGGGACACAGGAGC 646
Db 590 AAAAATGGTTTCACTCGTAGTGTACAGGTATCACTTACCGTGAAGTGGGCTCTGGTGC 649
Qy 647 TACGTGGCTGCAATTTGAGATTTTCAATAAATCTGGAATCTTAATGAGATGTATGATGAC 706
Db 650 CCAAGTCAGTGCCTCATTTGGAGATTTCAACAAATTTGGGACGCAATGCTGACATATGAC 709
Qy 707 TCAGAAATGAGTGTGTGTCTGGAGATCTTTTTCGCGAATTAATGAGATGGTTTCAACCAC 766
Db 710 TCGAAATGAATTTGGTGTCTGGAGATTTTCTGCAAAATAATGTGGATGGTTCTCTCTGC 769
Qy 767 AATTCCTCATGTTCTCGAGTAAACATACGATGATCTCCATCTGCGCAACAAAGATTC 826
Db 770 AATTCCTCATGGTCCAGAGTGAAGATACGTATGACACTCCATCAGGTGTTAGGATTC 829
Qy 827 TATTCCTGCTGGATCAAGATTTCTCAGTTCAAGCACAGGTGAATCCCATATAATATGGCAT 886

Db 830 CATTCCTGCTTGGATCAACTACTCTTCCACAGCTTCTCTGATGAAATTCATATAATGAAT 889
Qy 887 ATACTATGATCCTCCGAGGAGAGAGATATGTGTTCAAAAATCCTCAGCCNAGACACC 946
Db 890 ATATTATGATCCACCCGAGAGAGAGGTATATCTTCCAAACACCCAGCCGCAAGAAACC 949
Qy 947 AAAATCACTTCGGATTTATGAGTCGCACGCTTGAATGAGTAGTAGCGAGCCAGTAATTA 1006
Db 950 AAAGTCTCGAGAAATATGAAATCTCATATTTGAAATGAGTAGTCCGAGGCTTAAATTA 1009
Qy 1007 CACATATGCCAACTTTAGAGATGATGTCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
Db 1010 CTCATACGTGAATTTTAGAGATGAAGTCTTCTCTCGCATAAAAAGCTTGGTACAATGC 1069
Qy 1067 TGTTACGCTCATGGCTATTCAGAGCAATTCATATATGCTAGTATTTGGGTATCACGTGAC 1126
Db 1070 GGTGCAAAATTTATGGCTATTCAGAGCAATTCATATATGCTAGTATTTGGTATCATGTCAC 1129
Qy 1127 AAACCTTTTATGCAGCTAGCAGCCGATTTGGAATCTCTGATGATTTAAAGTCTCTAAATGA 1186
Db 1130 AAATTTTTCACCAAGCAGCCGTTTGGAAACCCCGACGACCTTAAGTCTTTGATGA 1189
Qy 1187 TAAAGCTCACGAGTTAGTCTTCTTGTCTCATGGATATTTGTTCAATGAGCATGATCAAC 1246
Db 1190 TAAAGCTCATGAGCTAGGAATTTGTTCTCATGGACATTTGTTCAACAGCATGATCAAA 1249
Qy 1247 TAATACGTTGGATGGCTGAATATTTGATGTTGATGTTGATGTTGATGTTGATGTTGAT 1306
Db 1250 TAATACGTTGGATGGCTGAATATTTGATGTTGATGTTGATGTTGATGTTGATGTTGAT 1309
Qy 1307 ACCACGGGCTCATCTGATGAGTGGGACTCTCGGCTTTTCAAACTATGGGAGCTGGAGGT 1366
Db 1310 AGCTCGTGGTATCATTTGGATGTTGGATTTCCGCTTTTAACTATGGAACCTGGAGGT 1369
Qy 1367 TCTAAGGTTTCTTCTTTCATAATGCAAGTGGTGGTGGATGAGTCAAGTTTGAATGGT 1426
Db 1370 ACTTAGGTATCTTCTCTCAAAATCGAGATGGTGGTGGATGAGTCAAAATTTGATGAT 1429
Qy 1427 CAGATTTGATGGGTGATCTCAATGATGATACACCCATCATGGATGCGAGGTAGATTTTAC 1486
Db 1430 TAGATTTGATGGGTGATCAATGATGATATCTCACACGGATTTATCGGTGGATTTAC 1489
Qy 1487 CGGCACTACAATGAATATCTTTGGATGCAACTGATGATGATGATGATGATGATGATGAT 1546
Db 1490 TGGGAATCTACGAGGAATCTTTGGATCGCACTGATGATGATGATGATGATGATGATGAT 1549
Qy 1547 GCTGTTGAATGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1606
Db 1550 GCTGTTCAACGATCTTATTCATGGGCTTTTCCAGATGCAATTTACCATTTGGTGAAGAT 1609
Qy 1607 TAGTGGAAATGCCAACAGTTTGCATTTCCGTTTGAAGATGGTGGTGGTGGTGGTGGTGGT 1666
Db 1610 TAGCGAAATGCCAGATTTTGTATTTCCGTTTCAAGATGGGGGTTTGGCTTTGATGATGAT 1669
Qy 1667 TCTCCACATGGCTGCTGCTGATAAATGGTTGAGATTTATTCAGAAAGAGATGAAGATTG 1726
Db 1670 GCTGCATATGGCAATTCCTGATAAATGATTTAGTTGCTCAAGAAACCGGATGAGGATT 1729
Qy 1727 GAAATGGGTGACATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1786
Db 1730 GAGAGTGGGTGATTTGTTTATACACTGACAAATAGAGATGGTGGGAAAGTGTGTTTC 1789
Qy 1787 TTAGTCTGAAGTCAATCACAGGCTTGTGTTGGTGAACAAATATTCGATTTTCGCTGAT 1846
Db 1790 ATACGCTGAAGTCAATGATCAAGCTCTAGTCTGGTGAATAAATATAGCATTTCTGCTGAT 1849
Qy 1847 GGAACAAGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1906
Db 1850 GGAACAAGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1909
Qy 1907 TGGAGTAGCATTGACAAATGATGAGGCTTATTTACCATGGGATTAGCGGAGAGGATA 1966

Db 1910 TGGGATAGCATTCACAAAGATGATTAGGCTTCTAATCTATGGGATAGGAGGAAAGGTA 1969
Qy 1967 TTTTGAATTTTATGGGAATGAATTTGGACACACCCGAGTGGATTGATTTTCCAAAGAGTGA 2026
Db 1970 CCTAAATTTTCATGGGAATGAATTCGGCCACCCCTGATGGATTGATTTCCCTTAGGGCTGA 2029
Qy 2027 TCTACATCTTCCAGTGGTAAATTTGTTCTCTGGGAACAATTAACAGTATGATAAATGCCG 2086
Db 2030 ACAACACCTCTCTGATGACTCAGTAATTTCCCGGAACCAATTCAGTTATGATAAATGCAG 2089
Qy 2087 GGGTAGGTTTGTATCTAGGCAATTCAAAGCATCTGAGATATCATGAAATGCCAGAGTTTGA 2146
Db 2090 ACGGAGATTTGACCTGGGAGATGCAGAAATATTTAAGATACCGTGGGTTGCAAGAAATTTGA 2149
Qy 2147 TCAAGCAATTCAGCACTTTGAAGAACCTTATGTTTTCATGACTTCTGAGCACCAATACAT 2206
Db 2150 CCGGCTATGAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCACTTCAT 2209
Qy 2207 ATACCGAAGGATGAAGGATCGGATCATTTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266
Db 2210 ATACGAAAGGATGAAGGAGATAGGATGATTGATTTTGAAGAAAGAAACCTAGTTTTGT 2269
Qy 2267 ATTCAATTTTCAATCGACTAGCAGCTATTCGAGTTACCGAGTTCGCTGCTTAAAGCCAGG 2326
Db 2270 CTTTAAATTTTCACTGGACAAAAGCTATTCAGACTATCGCATAGGCTGCCTGAGCCCTGG 2329
Qy 2327 AAAATACAGATAGTCTTGGATTACAGATGATCCTTTGTTGAGGCTTTGGCAGGCTTAG 2386
Db 2330 AAAATACAGGTTGCTTGGACTCAGATGATCCACTTTTGGTGGCTTCGGGAGAAATGA 2389
Qy 2387 TCATGATGAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCTTCGATCCTTCAT 2446
Db 2390 TCATAATGCCGAATATTTTACCTTTGAAGGATGGTATGATGATGCTCCTCGTTCAATTA 2449
Qy 2447 GGTGTACACACCATGTAGACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506
Db 2450 GGTGTATGCACCTTGTAGAACAGCAGTGGTCTATGCTACCTAGTAGAACAAAGAAAGA 2509
Qy 2507 TGAATTTGAA 2516
Db 2510 AGAAGAGAA 2519

RESULT 7
US-10-056-454A-17
; Sequence 17, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Unigema Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/056,454A
; FILING DATE: 25-Jun-2002
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2529 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; SEQUENCE DESCRIPTION: SEQ ID NO: 17:

US-10-056-454A-17
Query Match 53.3%; Score 1380; DB 15; Length 2529;
Best Local Similarity 76.6%; Pred. No. 0;
Matches 1674; Conservative 8; Mismatches 503; Indels 0; Gaps 0;
Qy 347 TGTGAAGATGAAGTAATAAAGAAATCTGTTCCAAATCGGGAGACAGTTACATCAGAAA 406
Db 343 TGGTAAATCTGAGGAGTCTAAACATTAATAATCTTCTGAGAGACAAATTAATTGATGAATC 402
Qy 407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCGGACAGAGGCAAGAAATATATGACAT 466
Db 403 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTTGGTCTGAGAAGATTTATGAAT 462
Qy 467 AGATCCAAAGCTTGACAGGCTTTTCGTCAACACCTAGATTACCGGTATTACAGATGCAAAAG 526
Db 463 AGACCCCTTTTGACAAACTATCTGTCACACTTGTATTACAGGTATTACAGTACAGAA 522
Qy 527 ACTCCGAGAAGAAATTAAGATATGAAGGTAGTCTGGATGTCATTTTCTCGTGGCTATGA 586
Db 523 ACTGAGGAGGCAATTCACAAAGTATGAGGGTGGTTTGGAAAGCTTTTCTCGTGGTTATGA 582
Qy 587 AAAGTTTGGTTTCTACGCGAGTGAACAGGAAATAACTTATAGACAGTGGGACACAGAGC 646
Db 583 AAAAATGGGTTTCACTGCTAGTACAGGTATCACTTACCGTGAGTGGGCTCTCGGTGC 642
Qy 647 TACGTGGGCTGCATTGATTGGAGATTTCAATAAATCTGGAATCTTAATGCAGATGTCATGAC 706
Db 643 CCAGTCAAGTGCCTCAITGGAGATTTCACAATTTGGGACGCAANTGCTGACATTTATGAC 702
Qy 707 TCAGAAATGAGTGGTGTCTGGGAGATCTTTTTCGCGAATAATGCAGATGTTTCCACCAC 766
Db 703 TCGAATGAATTTGGTGTCTGGGAGATTTTCTGCCAAATAATGTGGATGTTTCTCGTGC 762
Qy 767 AATTCGCCATGGTCTCGAGTAAGATAGCATGGATCTCCATCTGCGCAACAAGATTC 826
Db 763 AATTCCTCATGGGTCAGAGTGAAGATACGATGACACATCCATCAGGTGTTAAGGATTC 822
Qy 827 TATTCCTGCTGGATCAAGTTCTCAGTTCAGACACACAGGTGAACCTCCCATATAATGGCAT 886
Db 823 CATTCCTGCTGGATCAACTACTCTTTACAGCTTCTGTGATGAATTCATATAATGGAT 882
Qy 887 ATACTATGATCCTCCGAGGAGGAAAGATGTGTTCAAAATCCTCAGCCAAAAGAGACC 946
Db 883 ATATTATGATCCACCOCGAGGAGAGGTATRTCTTCCACACCCACCGCCAAAAGAACCC 942
Qy 947 AAAATCACTTCGGATTTATGATCGCAGCTTGGATGGATGAGTAGTACGAGCAGCAATTA 1006
Db 943 AAAGTCGCTGAGAAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCATAAATTA 1002
Qy 1007 CACATATGCCAACTTTTAGAGATGATGTGTTTCTTCGATCAAAAAGCTTGGCTACAATGC 1066
Db 1003 CTATAGCTGAATTTTAGAGATGAAGTTCTTCTCGCATTAATAAASCTTGGGTACAATGC 1062
Qy 1067 TGTTCACTCATGCTTATCAAGAGCAATTCATATTAATGCTAGTTTGGGTATCACGTCAC 1126
Db 1063 GGTGCAAAATTAATGGCTATTCAAGAGCAATTCATTAATATGCTAGTTTGGTATCATGTCAC 1122
Qy 1127 AAATTTTATGACAGTACGAGCCGATTTGGAACTCTCTGATGATTAAGTCTCTAATAGA 1186
Db 1123 AAATTTTGTGCAACCAAGACGCGCTTTTGGAAACCCCGACGACCTTAAGTCTTTGATGA 1182
Qy 1187 TAAAGCTCAGAGTTAGGTCTTCTTGTCTCATGGATATTGTTTCATAGCCATGATCAAC 1246
Db 1183 TAAAGCTCATGAGCTAGAAATTTGTTTCTCATGGACATTTGTTTCACAGCCATGATCAAA 1242
Qy 1247 TAATACGTTGGATGGCTGAATATGTTTGTAGTGGTACCGATGGTCACTATTTCCTCTGG 1306
Db 1243 TAATACGTTAGTGGACTGAACATGTTTGTGACGCGCACAGATAGTTGTTTACTTTCCTCTGG 1302
Qy 1307 ACCAGGGGTCATCATTTGGATGAGGACTCTCGGCTTTTCAACTATGGAGCTGGAGGT 1366
Db 1303 AGCTCGTGGTTATCAATGGATGGGATTCGCGCTCTTTAACTATGGAACCTGGAGGT 1362

1367 TCTAAGGTTTCTTCTTCAAAATGCAAGTCTGGTGGATGAGTACAAAGTTTGAATGGTT 1426
1368 ACTTAGGTTATCTTCTCAAAATGCGAGATGGTGGTGGATGAGTCAAAATTTGAATGGTT 1427
1427 CAGATTTGATGGGGTGAATCTCAATGATGATGACACCCATCATGATTTGAGGTAGATTTTAC 1486
1428 TAGATTTGATGGTGGATCATCAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1487
1487 CGGCAATCTCAATGAATATCTTTGATATGCAATGATGATGATGATGATGATGATGATGATGAT 1546
1488 TGGCAATCTCAATGAATATCTTTGATATGCAATGATGATGATGATGATGATGATGATGATGAT 1547
1547 GCTGTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1606
1548 GCTGTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1607
1607 TAGTGAATGCAACAGATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1666
1608 TAGGCAATGCGGATTTTCTTCAAAATGCGAGATGGTGGTGGATGATGATGATGATGATGATGAT 1667
1667 TCTCCACATGGTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1726
1668 GCTGCATATGCAATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1727
1727 GAAATGGGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1786
1728 GAGATGGGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1787
1787 TTATGCTGAAAGTCAATGCAAGGCTTTGATGATGATGATGATGATGATGATGATGATGATGAT 1846
1788 ATMGCTGAAAGTCAATGCAAGGCTTTGATGATGATGATGATGATGATGATGATGATGATGATGAT 1847
1847 GGAAGAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1906
1848 GGAAGAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1907
1907 TGGAT 1966
1908 TGGAT 1967
1967 TTTGAAATTTTATGGGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2026
1968 CCTAAATTTATGGGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2027
2027 TCTAATCTTCCAGTGAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2086
2028 RCAAACCTCTCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2087
2087 GCGTAGGTTTGAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2146
2088 ACAGGAT 2147
2147 TCAAGCAATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2206
2148 CCGGCTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2207
2207 ATCAAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2266
2208 ATCAAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2267
2267 ATTCAATTTTCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2326
2268 CTTTAAATTTTCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2327
2327 AAAGTACAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2386
2328 AAATACAGGTTGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2387
2387 TCATGAT 2446
2388 TCATGAT 2447

2447 GGTGTACACACCATGTAGAACACGACGATGATGATGATGATGATGATGATGATGATGATGAT 2506
2448 GGTGTATGACCTAGTAGAACACGACGATGATGATGATGATGATGATGATGATGATGATGAT 2507
2507 TGAATTTGAAACCTGTGCGCGGTTAA 2531
2508 AGAAGAAGAAGAACCCONNGAAGAA 2527
RESULT 8
US-10-056-454A-18
; Sequence 18, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Uniqema Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION NUMBER: US/10/056.454A
; FILING DATE: 25-Jun-2002
; INFORMATION FOR SEQ ID NO: 18:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3231 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-10-056-454A-18
Query Match 53.2%; Score 1377.8; DB 15; Length 3231;
Best Local Similarity 76.1%; Pred. No. 0;
Matches 1694; Conservative 2; Mismatches 529; Indels 0; Gaps 0;
347 TGTGAGATGAAGTAAATGAAGTCTGTTCCAAATCGCGGAGACAGTTCATGATCAAAA 406
656 TGGTAAATCGGAGAGTCTAAATCAATTAATCTTCTGAAGAGACAAATTTATGATGATC 715
407 AATTGGATCTAAACCAAGTCTCAATTCCTCCACCGGAGAGGCAAGAAATATATGATCAT 466
716 TGATAGATCAGAGAGAGGAGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAT 775
467 AGATCCAAAGTTGACAGGCTTTTCGTCAACACCTAGATATCCGGTATTCACAGTACAAAG 526
776 AGACCCCTTTTGACAAATCTATGCTCAACACCTTGAATTCAGAGTATTCACAGTACAAAG 835
527 ACTCCGAGAGAAATTCAGCAAGTATGAAGTATGAGTCTGATGATGATGATGATGATGATGAT 586
836 AATGAGGAGAGCAATTCAGCAAGTATGAGGTTGGAGGCTTTTCTGAGAGCTTTTCTCTG 895
587 AAAGTTTGGTTTCTCAGCAGTGAAGCAAGAAATTAATATAGAGAGTGGGCAACAGGAGC 646
896 AAAAATGGTTTCACTGCTAGTGTACAGTATCACTTACCGTGGAGTGGCTCTGCTGCTGC 955
647 TACGTGGGCTGCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 706
956 CCAGTCAGTCTCTCATTTGAGAGATTTCAACAAATTTGGGAGCGCAAAATGCTGACATATGAC 1015
707 TCAGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 766
1016 TCGAATGAAATTTGGTGTCTGGGAGATTTTCTGCCAAATTAATGATGATGATGATGATGATGAT 1075

APPLICATION NUMBER: US/10/056,454A									
FILING DATE: 25-Jun-2002									
INFORMATION FOR SEQ ID NO: 16:									
SEQUENCE CHARACTERISTICS:									
LENGTH: 2576 base pairs									
TYPE: nucleic acid									
STRANDEDNESS: single									
TOPOLOGY: linear									
SEQUENCE DESCRIPTION: SEQ ID NO: 16:									
US-10-056-454A-16									
Query Match									
Best Local Similarity 77.3%; Score 1370.4; DB 15; Length 2576;									
Matches 1677; Conservative 0; Mismatches 491; Indels 2; Gaps 1;									
Qy	347	TGTTGAAGATGAAGTAATAAAGAAATCTGTTCCAAATGCGGAGAGAGGCAAGAAATATATGACAT	406						
Db	350	TGGTAAACTGGAGGAGTCTAAACATTAATAACTTCTGAAGAGACAAATTATTGATGAATC	409						
Qy	407	AATTGGATCTAAACCAAGTCCATTCTCCACCGGCGAGAGGGCAAGAAATATATGACAT	466						
Db	410	TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAT	469						
Qy	467	AGATCCAAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCCACAGTACAAAAG	526						
Db	470	AGACCCCTTTTGACAAACTATCTGTCACACCTTGATTAAGGTATTACAGTATTCACAGTACAGAA	529						
Qy	527	ACTCCGAGAAGAAATTTGAACAAGTATGAAGGTAGTCTGGATGCAATTTCTCGTGGCTATGA	586						
Db	530	ACTGAGGAGGCAATTGACAAAGTATGAGGTGGTTTGGAAAGCTTTTCTCGTGGTTATGA	589						
Qy	587	AAAGTTTGGTTTCTCACGCAAGTGAACAGGATACCTTATAGAGAGTGGGCAACAGGAGC	646						
Db	590	AAAAATGGGTTTCACTCGTAGTGTACAGGTATCACTTACCCTGAGTGGGCTCTCGTGGTC	649						
Qy	647	TACGTGGGCTGATTTGAGATTTTCAATAAATCTGGAATCCTAATGAGATGTCATGAC	706						
Db	650	CCAGTCAGCTGCCCTCATTTGGAGATTTCAACAAATTTGGGCGCAATCTGACATATGAC	709						
Qy	707	TCAGAAATGAGTGTGTGTCTGGAGATCTTTTTCGCGAATATGAGATGTTTCAACACC	766						
Db	710	TCGGAATGAATTTGGTGTCTGGAGATTTTCTGCGCAAAATAATGTGGATGTTCTCTCTGC	769						
Qy	767	AATTCCTCATGTTCTCCAGTAAAGATACGATGATCTCCATCTGCGCAACAAGATTC	826						
Db	770	AATTCCTCATGTTCTCCAGTAAAGATACGATGATCTCCATCTGCGCAACAAGATTC	829						
Qy	827	TATTCCTGCTTGGATCAAGTCTCAGITTCAGCACACAGTGAATCCCATATATATGGCAT	886						
Db	830	CATTCTGCTTGGATCAACTACTC--TACAGCTTCTGATGAAATTCATATATGGAAT	887						
Qy	887	ATACATATGATCTCCCGAGGAGAGAAATATGTTTCAAAAATCTCAGCCAAAGAGACC	946						
Db	888	ATATTATGATCCACCGAAGAGAGAGGTATATCTTCAACACCACCGCCCAAGAAACC	947						
Qy	947	AAAATCACTTCGGATTTATGAGTCCGACGTTGGAATGAGTAGTACGGAGCCAGTAATTA	1006						
Db	948	AAAGTCGTGGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCCTAAATTA	1007						
Qy	1007	CACATATGCCAATTTAGAGATGATGTCTTCTCGCATCAAAAAGCTTGGCTACAATGC	1066						
Db	1008	CTCATACGTGAATTTTAGAGATGAAGTCTTCTCGCATCAAAAAGCTTGGGTACAATGC	1067						
Qy	1067	TGTTGAGTCTATGGCTATTCAAGAGCAATTCATATTATGCTAGTGTGGGTATCAGTCAAC	1126						
Db	1068	GCTGCAAAATATGGCTATTCAAGAGCAATTCATATTATGCTAGTGTGGGTATCAGTCAAC	1127						
Qy	1127	AAACTTTTATGAGTCTAGCAGCCGATTTGGAACTCTCGATGATTTAAAGTCTCTAATAGA	1186						
Db	1128	AAATTTTATGCAACCAAGCAGCCGTTTGGAAACGCCGACGACCTTAAGTCTTGAATGA	1187						
Qy	1187	TAAAGCTCACAGTATAGGTCTTCTTGTCTCATGATATGTTTCATAGCCATGATCAAC	1246						

Db	1188	TAAAGCTCATGAGCTAGGAATTTGTTTCTCATGGACATTTGTTTCACAGCCATGCATCAAA	1247
Qy	1247	TAATACGTTGGATGGGCTGAATATGTTGATGTAGCGATGGTCACCTACTTTTCTACTCTGG	1306
Db	1248	TAATACGTTGGATGGGCTGAATATGTTGATGTAGCGATGGTCACCTACTTTTCTACTCTGG	1307
Qy	1307	ACCACGGGTCATCATTTGGATGTGGGACTCTCCGCTTTTCAACTATGGGAGCTGGAGGT	1366
Db	1308	AGCTCGTGGTTATCATTTGGATGTGGGATTCGCCCTTTTAACTATGGAACCTGGAGGT	1367
Qy	1367	TCTAAGGTTTCTTCTTTCAAAATGCAAGGTGGTGGTGGATGAGTACAAGTTTGTATGGTT	1426
Db	1368	ACTTAGGTATCTTCTCTCAAAATGCGAGATGGTGGTGGATGAGTCAAAATTTGATGATTT	1427
Qy	1427	CAGATTTGATGGGTCGATCTCAATGATGATACACCCATCGATGATTCGAGCTAGATTTTAC	1486
Db	1428	TAGATTTGATGGTGTGACATCAATGATGATATCTCACCCAGGATTTATCGGTGGGATTCAC	1487
Qy	1487	CGGCAACTACAATGAATACCTTTTGGATATGCAACTGATGTAGATGCTGTGTGTTTATTTGAT	1546
Db	1488	TGGNACTACAGGAATACCTTTGGACTCGCAACTGATGTGATGCTGTGTGATCTGAT	1547
Qy	1547	GCTGTTGAATATGATGATCATGCTCTTCCAGAGGCTGTCCACATGGTGAAGATGT	1606
Db	1548	GCTGGTCAACGATCTTATTCATGGGCTTTTCCAGATGCAATTTACCATTTGTTGAAGATGT	1607
Qy	1607	TAGTGGATGCCAACAGTTTGCATTCGGTTGAGATGGTGGTGGCTTTGATTTGATTCG	1666
Db	1608	TAGCGGAATCCGACATTTTGTATTCCTCGTTCAAGATGGGGGTGTTGGCTTTGACTATCG	1667
Qy	1667	TCTCCACATGGCTGTTCTGATAAATGGGTTGAGATTTATTTCAAGAGAGAGATGAAGATTG	1726
Db	1668	GCTGCATATGCAATTTGCTGATAAATGGAATGAGTTGCTCAAGAAACCGGATGAGGATTG	1727
Qy	1727	GAATAAGGTTGACATTTGTAATATGCTGCAACACAGCGGTGGTTGGAAGTGTGTTTC	1786
Db	1728	GAGAGTGGGTGATATTTGTTTCACTACCTGACAAATAGAAAGATGGTCGGAAGTGTGTTTC	1787
Qy	1787	TTATGCTGAAAGTCATGACCCAGGCTTGTGTTGGTGACAAATATTTCCATTTTGGCTGAT	1846
Db	1788	ATAGCTGAAAGTCATGATCAAGCTCTAGTGGTGATGATGATGATGATGATGATGATGAT	1847
Qy	1847	GGACAAAGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT	1906
Db	1848	GGACAAAGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT	1907
Qy	1907	TGGAGTAGCATGTCACAAAATGATCAGGCTTTTACCATGGGATTAGCGGAGAGAGATA	1966
Db	1908	TGGGATAGCATTTGACAAAGATGATTTAGGCTTTGAACTATGGGATTAGGAGAGAGAGGTA	1967
Qy	1967	TTTGAATTTTATGGAAATGAATTTGGACACCCGAGTGGATGATTTTCCAGAGGTGA	2026
Db	1968	CCTAAATTTTATGGAAATGAATTTGGCCACCTTGGAGTGGATGATTTTCCCTAGGGCTGA	2027
Qy	2027	TCTACATCTTCCAGTGGTAAATTTGTTTCTCTGGGAACAATTTACAGTTTATGATAATGCC	2086
Db	2028	ACAACACTCTCTGATGATCTCAGTAAATTTCCCGGAACCAATTTCAATTTATGATAATGCAG	2087
Qy	2087	GCGTAGGTTGATCTAGGCAATTTCAAGATCTGAGATATCATGGAATGCAAGAGTTTGA	2146
Db	2088	ACGAGATTTTGCCTGGGAGATGCAAAATATTTAAAGATACCGTGGGTGCAAGAAATTTGA	2147
Qy	2147	TCAAGCAATTCAGCATCTTGAAGAGCTTATGTTTTCATGATCTCTGAGCACCAATACAT	2206
Db	2148	CCGGGCTATGAGTATCTTGAAGATAAATATGAGTTTATGATTTTCAAGAACCAAGTTTAT	2207
Qy	2207	ATCAACGGAAGGATGAAAGGATCGGATCATTTGCTTCTCGAGAGGGGAAACCTCGTTTTGT	2266
Db	2208	ATCAACGGAAGGATGAAAGGATAGGATGATGATTTGATTTGAAAGGAAACCTAGTTTTGT	2267
Qy	2267	ATTCAATTTTCAATTTGGAGTACGAGCTATTCGGATTACCGAGTTGGCTTGGCTTAAAGCCAGG	2326
Db	2268	CTTTAATTTTCACTGGGACAAAGAGCTATTCAGACTATTCGATAGGCTGCTGAAAGCCTCG	2327

Db 1893 GCTGATATGGCAATTCGTATACCGATGAGTTGCTCAAGAAACGGGATGAGATTG 1952
Qy 1727 GAAATAGGATGACATTTGATACATATGCTGACCAACAGCGGGTGGTGGAAAGTGTGTTTC 1786
Db 1953 GAGAGTGGTGTATATTTGTTATACACTGACAAATAGAAAGATGGTCGGAAGATGTGTTTC 2012
Qy 1787 TTATGCTGAAGTCAATGACCGAGCCCTTTGTTGGTGACAAACTATTGCAATTTGCGCTGAT 1846
Db 2013 ATACGCTGAAGTCAATGATCAAGCTCTAGTCGGTGATAAACTATAGCAATTTCTGCGCTGAT 2072
Qy 1847 GGACAAGATATGATGATCTTCAATGCTCTTGACAGACCATCTACTCTCTCATAGATCG 1906
Db 2073 GGACAAGATATGATGATTTTATGGCTCTGGATAGACCGTCAACATCAITTAATAGATCG 2132
Qy 1907 TGGATGATGATGACCAAAATGATCAGGCTTATTAACATGGGATAGCGGAGAGAGATA 1966
Db 2133 TGGGATAGCATTTGACCAAGATGATTAGGCTTTGTAACATATGGGATTTAGGAGGAGAGGATA 2192
Qy 1967 TTTGAAATTTATGGGAATGAATTTGGACACCCCGAGTGGATGATTTTCCCAAGAGGTGA 2026
Db 2193 CCTAAATTTATGGGAATGAATTTGGCCACCCCTGAGTGGATGATTTTCCCTAGGCGCTGA 2252
Qy 2027 TCTACATCTTCCAGTGGTAAATTTGTTTCTGGGAACAAATTACAGTTATGATAAATGCCG 2086
Db 2253 ACAACACCTCTCTGATGGCTCAGTAATCCCGGAACCAATTCAGTTATGATNAATGCAG 2312
Qy 2087 GCGTAGGTTTGTATTTAGGCAATTTCAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146
Db 2313 ACGGAGATTTGACCTGGGAGATGACAGATAATTTAAGATACCGTGGGTTGCAAGAAATTTGA 2372
Qy 2147 TCAAGCAATTCAGCATCTTGAGAGCCTATGTTTTCATGATCTTGAGCACCAATACAT 2206
Db 2373 CGGCGCTATGCAATCTTTGAAGATAAATATGAGTTTATGATCTTCAGAACACCACTTCAT 2432
Qy 2207 ATCCGGAAGGATGAAGGATTCGGATCATTTGTTTCCGAGAGGGGAAACCTCGTTTTTGT 2266
Db 2433 ATCCGGAAGGATGAAGGATGAGATGATGATTTGTTTGAAGAGGAAACCTAGTTTTGT 2492
Qy 2267 ATTCAATTTTCAATGGATAGCAGCTATTCGATATTCGAGTTGCGTCTTAAAGCCAGG 2326
Db 2493 CTTTAAATTTTCACTGGCAAAAAGCTATTCAGACTATCGCATAGCCTTCGCTGAAGCCCTGG 2552
Qy 2327 AAAGTACAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGCGAGCTTAG 2386
Db 2553 AAAATACAGGTTTGCCTTGGACTCAGATGATCCACTTTTGGTGGCTTCGGGAAATTTGA 2612
Qy 2387 TCATGATGACAGACCTTCAGCTTTGAAGGGTGGTACGATAACCGGCCCTCGATCCTTCAT 2446
Db 2613 TCATTAATGCCGAATATTTCACTTTTGAAGGATGGTATGATGATCGTCCCTCGTTCAATTTAT 2672
Qy 2447 GGTGTACACACCATGTAGAACAGAGTGGTCTATGCTTTAGTGGAGGATGAGTGGAGAA 2506
Db 2673 GGTGTATGACCTTTGTAACACAGCAGTGGTCTATGCACTAGTAGTAGACAAAGAAGAGAGA 2732
Qy 2507 TGAATTTGGAACCTGTCGCGGTTTAAAGATATATCTTAACACAGGTTCTTGAAGCAGGAATG 2566
Db 2733 AGNAGAAGAAGAAGAAGATAGACGACGATAGAGAAAGTAGTAGTAGAGAGAATG 2792

RESULT 11
US-09-938-842A-337
; Sequence 337, Application US/09938842A
; Patent No. US20020160378A1
; GENERAL INFORMATION:
; APPLICANT: Harper, Jeff
; APPLICANT: Kreps, Joel
; APPLICANT: Wang, Xun
; APPLICANT: Zhu, Tong
; TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
; TITLE OF INVENTION: SAME, AND METHODS OF USE
; FILE REFERENCE: SCRI1300-3
; CURRENT APPLICATION NUMBER: US/09/938,842A

; CURRENT FILING DATE: 2001-08-24
; PRIOR APPLICATION NUMBER: US 60/227,866
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: US 60/264,647
; PRIOR FILING DATE: 2001-01-16
; PRIOR APPLICATION NUMBER: US 60/300,111
; PRIOR FILING DATE: 2001-06-22
; NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 337
; LENGTH: 2577
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-938-842A-337

Query Match 52.6%; Score 1360.4; DB 9; Length 2577;
Best Local Similarity 74.1%; Pred. No. 0;
Matches 1778; Conservative 0; Mismatches 586; Indels 36; Gaps 3;

Qy 144 TTTTCTAGGAGGGTCTTCTCTGGAAAGTCACTCTCATGAATCTGACTCTCTCAAAATGTAATG 203
Db 136 TCTTCTGGGAAGGTTTGTCTCGAAGCCATCGTATGATTCGTATGCTCTTCTTAGCT 195
Qy 204 GTCACTGCTTTAAAGAGTCTTCTCTGATGGTGGATTCGAATGCAATGCTTATCTTCAACA 263
Db 196 ACCACTGCATCTGAGAAGTCTCCGTGGCCA---TCAGAGTATAGCTCTTCACTGCGCTCT 252
Qy 264 GATCAATTGGAAGCCCTGGCACAGATTTTCAAGAAATCCCGAGTGTCTTACTGATGTTGAG 323
Db 253 GATCAAGTACAATCTCGGATACCTGCTCTGACGATACTCAGGTGCTTCGGCAATGTAAGAC 312
Qy 324 AGTCTCAATTTGATGATGAATGATTTGTTGAAGATGAAGTAAATAAAGAAATCTG----TTCC 379
Db 313 GTTCAGAAACTGAAGAGCCAGGAAACAGAGACACTAGATCAAACTCTCTGCACCTCTCA 372
Qy 380 AATGCGGGAGACAGTTAGCATCAGAAAAATTT----- 410
Db 373 ACATCTGGAAGCATAAAGTTATAAAGAAAGATTTTGCAAGATGTCAACACTCTGTGCAACAA 432
Qy 411 GGATCTAAACCAAGGTCATTTCTCCACCCGAGAGGGCAAGAAATATATGACATAGAT 470
Db 433 GAAGTTGGGAGAGGAAGATTTCCACCTCTTGGAGATGGGAAGAGAATATATGACATTTGAT 492
Qy 471 CCAAGCTTTGACAGGCTTTTCGTCAACACCTAGATTTACCGGTATTTCACAGTACAAAGACTC 530
Db 493 CCTATGTTGAACAGTCACTCGTAATCATCTTTGATTTACCGATATGGGCAAGTACAGAAAAC 552
Qy 531 CGAGAAAGAAATTGACAGATGATGAAGTATGATGTCGATGCAATTTCTCGTGGCTATGAAAAG 590
Db 553 CGTGAAGAAATTGACAAAGATGAAGGTGGTGGAGGCAATTTTCTCGTGGTTATGAAATA 612
Qy 591 TTTGGTTTCTCAGCAGTGAACAGGAATAACTTTATAGAGATGGGCACCGAGGAGCTACG 650
Db 613 TTTGGCTTTCACTCGAAGCCCATCTGGTATCACCTTACCGGAATGGGCACCGGAGCTTAAG 672
Qy 651 TGGGCTGCATTTGATGAGATTTTCAATTAACCTGGAATCCTTAATGCAGATGTGATGACTCAG 710
Db 673 GCACATCACTGATCGGAGATTTTAAATACTGGAATCGGAAATCTGATGTTATGGCTCGG 732
Qy 711 AATGAGTGGTGTCTCGGAGATCTTTTTCGCGAATAATTCAGATGCTTCCACCACCAATTT 770
Db 733 AACGACTTTGGTGTGGGAAATATTTTCTGCCAAATAATGCTGATGCTCACCGAGCAATTT 792
Qy 771 CCCCATGTTCTCGAGTAAAGATACCGATGATACTCCATCTGGCAACAAAGATTTCTATT 830
Db 793 CCCCATGCTCCCGTGTGAAGATCCGATGGATACCCCATCTGGTATTAAGACTCCCAT 852
Qy 831 CCTGCTTGGATCAAGTTCTCAGTTCAAGCACCGAGTGAACCTCCCATATATATGCGATATAC 890
Db 853 CCAGCTTGGATCAAGTATTTCTGTCCAGCACCTCGGCGAGATCCCATATATATGAGATATAT 912
Qy 891 TATGATCTCCCGAGGAGAGAGATGTTGTTCAAAATCTCTAGCCCAAGAGAGCCAAA 950
Db 913 TATGACCTCTCTGAGGAGGATAAATATGCGTTCAACATCTCTCGTCCAAAGAAACCCACA 972

QY 951 TCACCTTCGGATTATAGTTCGACCGTTGGAATGAGTAGTACCGGACCACTAATTAACACA 1010
DB |||||
QY 973 TCGCTGCGTATATGAATACACATGTTGGAATGAGTAGTACCGAACCAAGATAATACA 1032
DB |||||
QY 1011 TATGCCAACTTTAGAGATGATGTCTTCTCCGATCAAAAAGCTGGCTGACAACTGCTGT 1070
DB |||||
QY 1033 TATGCCAACTTTAGAGATGATGTCTTCTCCGATCAAAAAGCTGGCTGATATGCTGTG 1092
DB |||||
QY 1071 CAGCTCATGGCTATTCAAGACGATTCATATTATGCTAGTTTGGGTATCATCGTCAACAAC 1130
DB |||||
QY 1093 CAGATAATGGCCATTCAAGACGATGCTTACTATGCCAGCTTTGGGTATCATGTGCAAAAT 1152
DB |||||
QY 1131 TTTTATGACAGTAGCAGCCGATTTGGAACTCTCGATGATTTAAAGTCTCTAATAGATAAA 1190
DB |||||
QY 1153 TTTTTCGCACCTAGCAGCCGCTTTGGAACTCTCGATGATTTAAATCTTTGATAGACAA 1212
DB |||||
QY 1191 GCTCAGAGTTAGTCTTCTGTTCTCATGATATTTGTTCAATAGCATGATCAACTAAT 1250
DB |||||
QY 1213 GCTCATGAGTAGTCTGTTCTGTTCTGATGATATTTGTGCAAGCCATGATCAAAAAC 1272
DB |||||
QY 1251 AGTTTGGATGGCTGAATGTTTGGATGTTGATGTTGATGTTGATGTTGATGTTGATGTT 1310
DB |||||
QY 1273 AACTGATGGCTGACATGTTTGGATGTTGATGTTGATGTTGATGTTGATGTTGATGTT 1332
DB |||||
QY 1311 CGGGGTCTCATTTGATGTTGGGACTCTCGCTTTTCAACTATGGGAGCTGGGAGGTTCTA 1370
DB |||||
QY 1333 CGTGGTTATCATTTGGATGTTGGATCTCTGCTCTTTCAATAGCGAAGCTGGGAGTCT 1392
DB |||||
QY 1371 AGTTTCTTTTCAAAAGCTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG 1430
DB |||||
QY 1393 AGTTATCTTTTCCAAACGAGATGTTGGCTGGGAAGATAAAGTTTGGTGGTGGTGGT 1452
DB |||||
QY 1431 TTTTATGGGTGACCTTCAATGATGATACACCCATCATGATGATGATGATGATGATGATG 1490
DB |||||
QY 1453 TTTGATGGTGGTACCTTCCATGATGATGATGATGATGATGATGATGATGATGATGATG 1512
DB |||||
QY 1491 AACTACAATGATCTTTGGATGATGCACTGATGATGATGATGATGATGATGATGATGATG 1550
DB |||||
QY 1513 AATTACATGATGATCTTTGGATGATGATGATGATGATGATGATGATGATGATGATG 1572
DB |||||
QY 1551 TTGAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1610
DB |||||
QY 1573 GTGAACGATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1632
DB |||||
QY 1611 GGAATGCCAACAGTTTGCATTCGGTTGAGATGATGATGATGATGATGATGATGATGATG 1670
DB |||||
QY 1633 GGGATGCCAGCTTTTGGCGTCTCTGTCGAAGACGCTGGTGGTGGTGGTGGTGGTGGTGG 1692
DB |||||
QY 1671 CACATGCTGTTGCTGATAAATGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT 1730
DB |||||
QY 1693 CACATGGCAGTGGCAGATTAATGGATGATGATGATGATGATGATGATGATGATGATG 1752
DB |||||
QY 1731 ATGGGTGACATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1790
DB |||||
QY 1753 GTTGGTGTATTAATTTCAAGCTTACCAACAGGAGTGGGAGAGAGAGAGAGAGAGAG 1812
DB |||||
QY 1791 GCTGAAGTCTGACACGAGCCCTTGTGGTGAACAACTATTGCAATTTGGCTGATGAC 1850
DB |||||
QY 1813 CGAGAGAGTCAATGATCAAGCCCTTGTGGAGACAAACGATAGCTTTCTGGCTAATGAT 1872
DB |||||
QY 1851 AAGGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1910
DB |||||
QY 1873 AAGGACATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1932
DB |||||
QY 1911 GTAGATTGCAAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1970
DB |||||
QY 1933 ATTTGTTTACACAAATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1992
DB |||||
QY 1971 AATTTTATGGGAAATGAAATTTGGACACCCGAGTGGATGATGATGATGATGATGATGAT 2030
DB |||||
QY 1993 AATTTTATGGGAAACGAATTTGGACACCCGAGATGGATCGACTTCCCAAGGACCCAG 2052
DB |||||

QY 2031 CATCTTCCAGTGGTAAATTTTCTCTGGGAAACAATTAACAGTTATGATAAATCCGGCGT 2090
DB |||||
QY 2053 CACCTTCTGATGGCAGAGTCACTCGCTGGGAATTAATGCTAGTTATGATAAATCCGACGT 2112
DB |||||
QY 2091 AGTTTGTATGATGGAATTTCAAGCATCTGAGATATCATGGAATGCAAGAGTTTGTATCAA 2150
DB |||||
QY 2113 AGTTTGTATGATGGAATTTCAAGCATCTGAGATATCATGGAATGCAAGAGTTTGTATCAA 2172
DB |||||
QY 2151 GCAATTCAGCATCTTGAAGAACCTATGTTTTCATGACTCTTGAGACCAATACATATCA 2210
DB |||||
QY 2173 GCAATGCAAAATCTAGAGGACGATGTTTTCATGACTCTGAGACCAAGATATATCC 2232
DB |||||
QY 2211 CGGAAGATGAAAGGATCGGATCAATCTCTTCAGAGGGGAAACCTCGTTTGTATATTC 2270
DB |||||
QY 2233 CGCAAGATGAAAGGACAGAGTCAATGTAATTCAGAGAGAGTAACTTGTCTTCTGCTTTC 2292
DB |||||
QY 2271 AATTTTCACTAGGACTAGGACTATTCGATTTACGAGTTTGGCTGTTAAAGCCAGGAAG 2330
DB |||||
QY 2293 AACTTCCATCGGACCAACAGTTACTCTGACTACCGTATCGGTTGCTCTGTTTCCCGGAAG 2352
DB |||||
QY 2331 TACAAGATAGTCTTGGATTCAGATGATCTCTTGTGAGGCTTTGGCAGGCTTAGTCAAT 2390
DB |||||
QY 2353 TACAAGATAGTCTTGGATTCAGATGATCTCTTGTGAGGCTTTGGCAGGCTTAGTCAAT 2412
DB |||||
QY 2391 GATCAGAGCATCTTCACTTTGAAAGGTTGATGATGATGATGATGATGATGATGATGATG 2450
DB |||||
QY 2413 TCCGCGGAGTTTTCACCTCTGATGGAAGGCAACGATAGGCTTGTCTCTTCTGCTG 2472
DB |||||
QY 2451 TACAACCATGTAAGAACAGCATGCTCTATGCTTTAGTGGAGGATGAAGTGGAGAAATCAA 2510
DB |||||
QY 2473 TATGACCGTGCAGAACCGCTGTAGTTTACGCTGCAAGTATGATGATGATGATGATG 2532
DB |||||

RESULT 12

US-09-938-842A-337
; Sequence 337, Application US/09938842A
; Publication No. US20040009476A9
; GENERAL INFORMATION:
; APPLICANT: Harper, Jeff
; APPLICANT: Kreps, Joel
; APPLICANT: Wang, Xun
; APPLICANT: Zhu, Tong
; TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
; TITLE OF INVENTION: SAME, AND METHODS OF USE
; FILE REFERENCE: SRIPI300-3
; CURRENT APPLICATION NUMBER: US/09/938,842A
; CURRENT FILING DATE: 2001-08-24
; PRIOR APPLICATION NUMBER: US 60/227,866
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: US 60/264,647
; PRIOR FILING DATE: 2001-01-16
; PRIOR APPLICATION NUMBER: US 60/300,111
; PRIOR FILING DATE: 2001-06-22
; NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 337
; LENGTH: 2577
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-938-842A-337

Query Match 52.6%; Score 1360.4; DB 11; Length 2577;
Best Local Similarity 74.1%; Pred. No. 0;
Matches 1778; Conservative 0; Mismatches 586; Indels 36; Gaps 3;
QY 144 TTTTCTAGGAGGCTTCTCTGGAAGTCACTCTCATGAATCTGACTCTCTCAATGTAATG 203
DB |||||
QY 136 TCTTCTGGAGAGGTTTGTCTGGAAGCCATCGTATGATTTGATTCGCTTCTTCTAGCT 195
DB |||||
QY 204 GTCACTGCTTCTAAAGAGCTTCTCTGATGCTGCGATTTGAATGCTTTCTTCTTCAACA 263
DB |||||
QY 196 ACCATGATCTGAGAAGCTCCGTGGCA---TCAGATGATAGCTCTTCACTGCTCT 252
DB |||||
QY 264 GATCAATTGGAAGCCCTTGGCACAGTTTTCAGAGAATCCAGAGTCTTACTGATGTTGAG 323
DB |||||

Qy 897 CCTCCGAGGAGAGATATGTCTTCAAAATCCTCAGCCAAAGAGACCAAAATCACTT 956
Db 1007 CCTCTGAAGAGGAGAGATACATATTCAGCATCTCAACCTAAAGACCAAAAGTCATG 1066
Qy 957 CGGATTTATGAGTCGCAGCTGGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCC 1016
Db 1067 CGGATATACGAAACTCATGTTGGAAATGAGTAGCAGCGGCCAAAGATCAACACGTATGCA 1126
Qy 1017 AACTTTAGAGATGATGCTCTTCGCAATCAAAAGCTTTGGCTACAATGCTGTTCAAGTC 1076
Db 1127 AACTTTAGGATAGGTCCTTCCAAGAAATCAAAAGCTTTGGATACAATGCAAGTCGCAATA 1186
Qy 1077 ATGGCTATTCAAGAGCATTCATATATGCTAGTTTGGGTATCAGCTCACAAACTTTTAT 1136
Db 1187 ATGGCAATTCAGAGCATGCAATATATGGAAGCTTTGGGTACCATGTCACCAATTTCTTT 1246
Qy 1137 GCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGATAAAAGCTCAC 1196
Db 1247 GCACCAAGTAGTCGTTTCGGACCCCAAGAGATTTAAATCTCTGATTTGATTAAGCTCAT 1306
Qy 1197 GAGTATGCTCTTCTGTTCTCATGGATATGTTTATAGCCATGCAATCAACTAAATACGTTG 1256
Db 1307 GAGCTTGGTTAGTTGTCTCATGGATGTTGTTACAGCCATGCGTCAAAATAATACCCCTA 1366
Qy 1257 GATGGCTGAATATGTTTATGAGTACGGATGGTCACTACTTTTCACTCTGGACCAAGGGGT 1316
Db 1367 GATGGGTTGAAACGGTTTATGATGGTACAGATACGCAATTAATTTTATGATGTTTACGGGCT 1426
Qy 1317 CATCAATGGAATGTTGGACTCTCGCTTTTCAACTATGGAGCTGGGAGGTTCTAAGGTTT 1376
Db 1427 CATCAATGGAATGTTGGACTCTCGCTTTTCAACTATGGGAATTTGGGAAGTTCTAAGATT 1486
Qy 1377 CTCTTTTCAATGCAAGTGTTGGTTGGATCAGTACAAAGTTTGTATGGTTTCAAGATTTGAT 1436
Db 1487 CTACTATCCAATGCAAGATGGTGGCTCGAGGATATAAGTTTGTATGGTTTCAAGATTTGAC 1546
Qy 1437 GGGGTGACTTCAATGATGTACACCATCATCGGATTCAGGATAGATTTTACCGGCAACTAC 1496
Db 1547 GGGGTGACCTCAATGATGTACACTCATCGGATTAAGTACAGTATGATTTTACGGGCAACTAC 1606
Qy 1497 AATGAATACTTTGGATATGCAACTGATGATGCTGTGGTTTATTTGATGCTGTGAAT 1556
Db 1607 AGTGAATACTTTGGATTTGCCACTGATGCTGATGAGTAGTTTACTTGATGCTGTGAAT 1666
Qy 1557 GATATGATTCATGTCCTTCCGAGGCTGTACCATTTGTTGAAGATGTTTGTAGTGAATG 1616
Db 1667 GATTTAAATTCATGGACTTTATCTGAGGCTGTAGCCATTTGGTGAAGATGTCAAGTGAATG 1726
Qy 1617 CCACAGTTTGCATTCGGTTGAGATGGTGGTTGGCTTTGATTTATCGTCTCCACATG 1676
Db 1727 CCTCATTTGGCCCTTCTGTTCAAGATGGTGGGTTGGTTTGTATTCGCTTCATATG 1786
Qy 1677 GCTGTTGCTGATAAATGGGTTGAGATTTATCAGAAAGAGATGAAGATTGGAAATGGGT 1736
Db 1787 GCTGTTCTGACAAATGATTTGAATCTCTCAAGCAAGTGAATCTTTGGAAGATGGGT 1846
Qy 1737 GACATTTGACATATGCTGACCAACAGGCGGTGGTTGGAAAGATGTTGTTCTTATGCTGAA 1796
Db 1847 GATATTTGTGCACACACTGACTAAACAGAAGGTGGTCAAGAAAGTGTGTACTTATGCTGAA 1906
Qy 1797 AGTCATGACCAAGCCCTTGTGGTGCACAAACTATTTGCAATTTTGGCTGATGCAAGGAT 1856
Db 1907 AGTCATGATCAAGCACTAGTTGGTGACAAACTATTTGCAATTCGTTGATGCAAGGAT 1966
Qy 1857 ATGTATGACTTTCATGGCTTTGACAGACCACTACTCTCTCATAGATCGTGGAGTAGCA 1916
Db 1967 ATGTATGATTTTATGGCTCTGGACAGACCGGCAACCACTAGCATTTGATCGTGAATAGCA 2026
Qy 1917 TTGCAAAAAATGATCAGGCTTATTAACCATGGATTTAGCGGAGAGGATATTTGNAATTTT 1976
Db 2027 TTGCAAAAAATGATTAGACTTATATCAAAATGGGGTTTAGGAGGAGAGGCTATCTTAACTTT 2086

Qy 1977 ATGGGAAATGAATTTGGACACACCCGAGTGGATTAATTTTCCAAAGAGTGTATCTACATCTT 2036
Db 2087 ATGGGAAATGAGTTTCGGACATCTCTGAATGATTTGATTTTCCAAAGAGTCTCCACAAGTACTT 2146
Qy 2037 CCAGTGGTAAATTTGTTCTCTGGGAAACAATTAAGTTATGATTAATGCGCGGCTAGGTTT 2096
Db 2147 CCAATGGTAAATTTTCATCCAGGGAATAACAACAGTTATGATTAATGCGCGTTCGAAGATTT 2206
Qy 2097 GATCTAGGCAATTTCAAGCATCTGAGATATCATGGAATGCAAGATTTGATCAAGCAATTT 2156
Db 2207 GACCTGGGTATCGGCACTATCTTAGGTATCGTGGCATGCTAGAGTTTGACCGGCCGATG 2266
Qy 2157 CAGCATCTTGAAGAAGCTATGCTTTTCATGACTTTCTGAGCAACCAATACATATCACGGAAG 2216
Db 2267 CAGTCTCTCGAGGAAATAATGAGTTTCATGACATCAGACCAACAGTACATATCTCGAAAG 2326
Qy 2217 GATGAAGGATCGGATCATTTGCTTCGAGAGGGGAAACCTCGTTTGTATTTCAATTTT 2276
Db 2327 CATGAAGAGGATAAGATGATTAATTTGAGAAGGAGATCTGGTATTTGTGTTCAACTTC 2386
Qy 2277 CATTGGACTAGCAGCTATTCGGATTAACCGATTCAGGATGGCTTAAAGCCAGGAAAGTACAAG 2336
Db 2387 CATTGGAGTAACAGCTATTTTGACTACCGGTGTTGGTTGTTTAAAGCCGAGGAAATATAAG 2446
Qy 2337 ATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTTGGCAGGCTTAGTCATGATGCA 2396
Db 2447 GTGGTCTTGGACTCAGATGCTGGACTCTTTGGTGGATTTGGCAGGATCCATCACACTGCA 2506
Qy 2397 GAGCACTTCAGCTTTGAAGGGTGGTAGATAACCGGCTCGATCCCTTCATGTTGTTGATACA 2456
Db 2507 GAGCACTTCACTGCGGATTTGTTTCAATGATGACACAGGCGCTTACTCGTTCTCAGTTTATCT 2566
Qy 2457 CCATGTAGAACAGCAGTGGTCTATGCTTTTATGTCGAGGATGAA 2498
Db 2567 CCTAGCAGAACCTGCGTTGTCTATGCTCCAGCGGAATGAGAA 2608

Search completed: July 17, 2004, 00:05:39

Job time : 1591 secs

GenCore version 5.1.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: July 16, 2004, 18:07:05 ; Search time 182 Seconds
(without alignments)
7891.280 Million cell updates/sec

Title: US-09-297-703C-28
Perfect score: 2588
Sequence: 1 cttcttaacttcgcaaa.....attattgatcttcctatggt 2588

Scoring table: IDENTITY NUC
Gapop 10.0 , Gapext 1.0

Searched: 682709 seqs, 277475446 residues
Total number of hits satisfying chosen parameters: 1365418

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents NA: *
1: /cgn2_6/prodata/2/ina/5A-COMB.seq: *
2: /cgn2_6/prodata/2/ina/5B-COMB.seq: *
3: /cgn2_6/prodata/2/ina/6A-COMB.seq: *
4: /cgn2_6/prodata/2/ina/6B-COMB.seq: *
5: /cgn2_6/prodata/2/ina/PCTUS-COMB.seq: *
6: /cgn2_6/prodata/2/ina/backfiles1.seq: *

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1382.4	53.4	3074	US-09-087-277-1	Sequence 1, Appli
2	1382.4	53.4	3074	US-09-658-499-1	Sequence 1, Appli
3	1256.6	48.6	2720	US-09-731-166-11	Sequence 11, Appli
4	1251.8	48.4	2446	US-09-731-166-9	Sequence 9, Appli
5	1251.8	48.4	2665	US-09-257-894-1	Sequence 1, Appli
6	1251.8	48.4	2725	US-08-941-445A-14	Sequence 14, Appli
7	1245.2	48.1	2853	US-09-609-040-3	Sequence 3, Appli
8	1097.4	42.4	2087	US-09-257-894-9	Sequence 9, Appli
9	1095.4	42.3	2165	US-09-257-894-8	Sequence 8, Appli
10	947.4	36.6	1393	US-09-087-277-3	Sequence 3, Appli
11	947.4	36.6	1393	US-09-658-499-3	Sequence 3, Appli
12	633.4	24.5	2470	US-09-731-166-13	Sequence 13, Appli
13	633.4	24.5	2487	US-09-257-894-19	Sequence 19, Appli
14	633.4	24.5	2565	US-09-257-894-24	Sequence 24, Appli
15	633.4	24.5	2763	US-08-941-445A-16	Sequence 16, Appli
16	633.4	24.5	2772	US-09-257-894-12	Sequence 12, Appli
17	605.2	23.4	3128	US-08-716-449-1	Sequence 1, Appli
18	587.8	22.7	2909	US-08-104-158-1	Sequence 1, Appli
19	587.8	22.7	2909	US-09-609-040-1	Sequence 1, Appli
20	546.8	21.1	1809	US-09-257-894-25	Sequence 25, Appli
21	546.8	21.1	1865	US-09-257-894-20	Sequence 20, Appli
22	369	14.3	11469	US-09-367-895-29	Sequence 29, Appli
23	369	14.3	11478	US-08-981-803-29	Sequence 29, Appli
24	369	14.3	11478	US-08-983-440-29	Sequence 29, Appli
25	326.6	12.6	5402	US-09-221-017B-194	Sequence 194, Appli
26	178.8	6.9	303	US-09-313-294A-6200	Sequence 6200, Appli
27	109.6	4.2	414	US-09-257-894-2	Sequence 2, Appli

c	28	96.2	3.7	601	4	US-09-401-064-304	Sequence 304, Appli
c	29	86.2	3.3	1230025	4	US-09-198-452A-1	Sequence 1, Appli
c	30	80.8	3.1	1830121	4	US-09-557-884-1	Sequence 1, Appli
c	31	80.8	2.9	1830121	4	US-09-643-900A-1	Sequence 1, Appli
c	32	75.6	2.9	4403765	3	US-09-103-840A-2	Sequence 2, Appli
c	33	75.6	2.9	4411529	3	US-09-103-840A-1	Sequence 3, Appli
c	34	68.4	2.6	2426	3	US-08-528-026C-3	Sequence 1, Appli
c	35	67.2	2.6	2475	4	US-09-579-365-1	Sequence 1, Appli
c	36	66.2	2.6	1866	4	US-09-537-120-1	Sequence 1, Appli
c	37	65.6	2.5	2307	4	US-09-489-039A-3960	Sequence 3960, Ap
c	38	56.8	2.2	571	4	US-09-257-894-16	Sequence 16, Appli
c	39	55.4	2.1	356	4	US-09-634-238-169	Sequence 169, App
c	40	45	1.7	2691	4	US-09-298-924-5	Sequence 5, Appli
c	41	43.2	1.7	1308	4	US-09-252-991A-8131	Sequence 8131, Ap
c	42	43.2	1.7	1701	4	US-09-252-991A-8109	Sequence 8109, Ap
c	43	43.2	1.7	2472	4	US-09-252-991A-8197	Sequence 8197, Ap
c	44	43.2	1.7	7218	1	US-08-232-463-14	Sequence 14, Appli
c	45	41.4	1.6	1404	1	US-08-204-656B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-087-277-1
; Sequence 1, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamehid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT FILING DATE: 1998-05-29
; CURRENT FILING DATE: 1998-05-29
; EARLIER APPLICATION NUMBER: PCT/SE96/01558
; EARLIER FILING DATE: 1996-11-28
; EARLIER APPLICATION NUMBER: SE 9504272-7
; EARLIER FILING DATE: 1995-11-29
; EARLIER APPLICATION NUMBER: SE 9601506-0
; EARLIER FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 3074
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:bell gene
; OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
; OTHER INFORMATION: (potato)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (189)..(2825)
; FEATURE:
; NAME/KEY: sig_peptide
; LOCATION: (189)..(332)
; FEATURE:
; NAME/KEY: mat_peptide
; LOCATION: (333)..(2825)
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (92)..(2156)
; OTHER INFORMATION: Nucleotides 92, 285, 1406, 1430, 1897 and 2156 are
; OTHER INFORMATION: n wherein n = A, C, G or T.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (285)..(287)
; OTHER INFORMATION: Amino acid -16 is Xaa wherein Xaa = Ile, Leu, Val
; OTHER INFORMATION: or Phe.
; FEATURE:

```
; NAME/KEY: misc_feature
; LOCATION: (1404)..(1406)
; OTHER INFORMATION: Amino acid 358 is Xaa wherein Xaa = Leu or Phe.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1428)..(1430)
; OTHER INFORMATION: Amino acid 366 is Xaa wherein Xaa = Thr.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1896)..(1898)
; OTHER INFORMATION: Amino acid 522 is Xaa wherein Xaa = Tyr, Ser, Cys
; OTHER INFORMATION: or Phe.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (2154)..(2156)
; OTHER INFORMATION: Amino acid 608 is Xaa wherein Xaa = Pro.
;
US-09-087-277-1

Query Match      53.4%; Score 1382.4; DB 3; Length 3074;
Best Local Similarity 76.6%; Pred. No. 0;
Matches 1689; Conservative 0; Mismatches 515; Indels 0; Gaps 0;

QY 347 TGTTCAGAGTGAAGTAAATAAAGAAATCTGTTCCAAATGCGGGAGACAGATTAGCATCAGAAA 406
DB 617 TGGTAAACTGGAGGAGTCTAAACATTAATACTTCTGAAGACAAATATTATGATGATC 676
QY 407 AATTGGATCTAAACCAAGTCCATTCCTCCACCGGAGAGGGCMAAGAAATATATGACAT 466
DB 677 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAAGATTTATGAAT 736
QY 467 AGATCCAGCTTGACAGGCTTTCGTCACACCTAGATTACCGGTATTACAGTACAAAAG 526
DB 737 AGACCCCTTTTGACAAACTATCGTCAACACCCCTGATTACAGGTATTACAGTACAAAG 796
QY 527 ACTCCGAGAGAAAATGACAGTATGAAGTAGTCTGGATGCAATTTTCTCGTGGCTATGA 586
DB 797 ACTGAGGAGGCAATTGACAGTATGAGGTGGTTTGGAGCTTTTCTCGTGGTTATGA 856
QY 587 AAGTTTGGTTTCTCCAGGATGAAGAGGAAATACTTATAGAGTGGGCGACCAAGAGC 646
DB 857 AAAAAATGGGTTTCACTCGTAGTGTACAGGTATCACTTACCGTGAAGTGGGCTCCTGGTGC 916
QY 647 TACGTGGGCTGATGATTGGAGATTTCAAATACTGGAATCTCTAATGAGATGTCATGAC 706
DB 917 CCAGTCAGCTGCCCTCATTTGGAGATTTCACAAATTTGGACGCAAAATGCTGACATATGAC 976
QY 707 TCAGAAATGAGTGTGTGTCTGGAGATCTTTTTCGGAATAATGAGATGGTTCACCAACC 766
DB 977 TCGGAATGAAATTTGGTGTCTGGAGATTTTCTGCCAAATAATGTTGGATGGTTCTCCTGC 1036
QY 767 AATTCGCCATGGTTCTCGAGTAAAGATAGCGATGGATACTCCATCTGGCAACAAGATTC 826
DB 1037 AATTCCTCATGGGTCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1096
QY 827 TATTCCTGCTCGGATCAAGTTCTCAGTTCAAGCACAGGTGAATCCCATATAATGGCAT 886
DB 1097 CATTCCTGCTCGGATCAACTACTCTTTACAGCTTCTGATGAAATCCATATATGGAAT 1156
QY 887 ATACTATGATCTCCCGAGGAGGAGAGTATGTTTCAAAAATCTCCAGCCCAAGAGACC 946
DB 1157 ATATTATGATCCACCGAAGAGGAGGATATATCTTCCAAACACCCACCGCCCAAGAAACC 1216
QY 947 AAAATCACTTCGGATTTATGATCCGACGTTGGAAATGAGTAGTAGCGGAGCCAGTAAATTA 1006
DB 1217 AAGTCGCTGAGAAATATATGAATCTCATATTGGAATGAGTAGTCCGAGCCCTAAATAATTA 1276
QY 1007 CACATATGCAACTTTAGAGATGATGTGCTTCTCCGATCAAAAAGCTTGGCTACAAATGC 1066
DB 1277 CTCATACGTGAATTTTAGAGATGAAGTCTTCTCCGATCAAAAAGCTTGGGTACAAATGC 1336
QY 1067 TGTTCAGCTCATGGCTATTCAAGAGCAATTCATATTATGCTAGTTTGGGTATFCAGGTCAAC 1126
DB 1337 GGTGCAAAATTTATGGCTATTCAAGAGCAATTCCTTATTATGCTAGTTTGGTTTATCATGTCA 1396
```

```
QY 1127 AAACCTTTTATGCAGCTAGCAGCCGATTTTGGAACTCCTGTGATGATTTAAAGTCTCTAATAGA 1186
DB 1397 AAATTTTTTTTNGCACCACCAAGCAGCCGTTTGGAAACCCCGCAGACCTTAAAGTCTTTGATGA 1456
QY 1187 TAAAGCTCAGAGTTAGGTCTTCTTGTCTCATGGATATTGTTTCATAGCCATGATCAAC 1246
DB 1457 TAAAGCTCATGAGCTAGGAATTTGTTCTCATGGACATTTGTTTCACAGCCATGATCAAA 1516
QY 1247 TAATACTTGGATGGGCTGAATATGTTTGTATGGTACCGATGGTCACTATCTTCTCTCTGG 1306
DB 1517 TAATACTTTAGATGGACTGAACATGTTTGAACGACAGATAGTTGTTTACTTCTCTCTCTGG 1576
QY 1307 ACCACGGGGTCATCATTTGGATGTTGGGACTCTCGCTTTTCAACTATCGGAGCTGGGAGGT 1366
DB 1577 AGCTCGTGGTTATCATTTGGATGTTGGGATTTCCCGCTCTTTAACTATGAAACTCGGAGGT 1636
QY 1367 TCTAAGGTTTCTTCTTCAAAATGCAAGTGGTGGTGGATGAGTACAAAGTTTGTATGGGTT 1426
DB 1637 ACTTAGGTATCTTCTCTCAAAATGCGAGATGGTGGTGGATGAGTTCAAATTTGATGATTT 1696
QY 1427 CAGATTTGATGGGTTGACTTCAATGATGTACACCATCATGGATTCGAGGTAGATTTTAC 1486
DB 1697 TAGATTTGATGGTGTGACATCAATGATGTATCTCACACGGATTTATCGGTGGGATTCAC 1756
QY 1487 CGGCAACTACAATGAATACTTTTGGATATGCAACTGATGTAGATGCTGCTGTTTATTTGAT 1546
DB 1757 TGGGAATCTACAGGAATACTTTTGGACTCGCAACTGATGTGGATGCTGTTGTTGTTATCTGAT 1816
QY 1547 GCTTGTGAATGATATGATTTCAATGCTCTTCTCCAGAGGCTGTCAACATGGTGAAGATGT 1606
DB 1817 GCTGGTCAACGATCTTATTTCAATGGGCTTTTCCAGATGCAATTTACCAATGGTGAAGATGT 1876
QY 1607 TAGTGGAAATGCCAACAGTTTTCATTCGGTTGAAAGATGGTGGTGGTGGTGGTGGTGGTGGT 1666
DB 1877 TAGCGGAATGCCACATTTTNTATTTCCCGTTCAAGATGGGGGTGGTGGGCTTGTGCTATCG 1936
QY 1667 TCTCCACATGGCTGCTGCTGAATAATGGTTGAGATTATTACAGAAAGAGATGAAGATTTG 1726
DB 1937 GCTGCATATGCAATTTGCTGATTAATGATTTAGTTGCTCAAGAAACGGGATGAGGATTTG 1996
QY 1727 GAAATCGGTGACATTTGATACATATGCTGACCAACAGCGGGTGGTTGAAAAGTGTGTTTC 1786
DB 1997 GAGAGTGGTGATATTGTTTCACTACACTGACAAATAGAAAGATGGTCCGAAAAGTGTGTTTC 2056
QY 1787 TTATGCTGAAAGTCATCAACAGGCCCTTGTGTTGGTGAACAAACTATTTCGATTTTGGCTGAT 1846
DB 2057 ATACGCTGAAAGTCATGATCAAGCTCTAGTCGGGTGATAAAACTATAGCATTTCTGGCTGAT 2116
QY 1847 GGACAAGGATATGATGACTTTTCATGGCTCTTGAACAGACCATCTACTCTCTCATAGATCG 1906
DB 2117 GGAGAAGGATATGATGATGATTTTATGGCTCTGGATAGACCTCAACATCATTAATAGATCG 2176
QY 1907 TGGAGTAGCATTTGACAAAAATGATCAGGCTTATTTACCATGGGATTTAGCGGAGAGGATA 1966
DB 2177 TGGGATAGCATTTGACAAAGATGATTAGGCTTGTAACTATGGGATTTAGGAGGAGAGGATA 2236
QY 1967 TTTGAAATTTATGGGAAATGAAATTTGGACACCCCGAGTGGATTTGATTTTCCCAAGAGGTA 2026
DB 2237 CCTAAATTTATGCGGAAATGAAATTTCCGCCACCCCTGAGTGGATGATTTTCCCTCGGGCTGA 2296
QY 2027 TCTACATCTTCCCAAGTGGTAAATTTGTTTCTCTGGGAAACAAATTCAGATTTATGATAAATGCCG 2086
DB 2297 ACAACACTCTCTGATGGCTCAGTAATTTCCCGGAAACCAATTCAGTTATGATTAATGACAG 2356
QY 2087 GCGTAGGTTTGAATCTAGGCAATTCAAAGCATCTCAGATATCATGGAATGCAAGAGTTTGA 2146
DB 2357 ACGGAGATTTGACCTGGGAGATGCAAGATAATTTAAGATACCGTGGGTTCGAAGAAATTTGA 2416
QY 2147 TCAAGCAATTCAGCATCTTTCAGAGGCTTATGGTTTTCATGACTTCTGAGCAGCAATATCAT 2206
DB 2417 CCGGGCTATGCGATGATCTTGAAGATAAATATGAGTTTATGACTTTCAGAAACCAAGTTCAT 2476
```


Db 735 AAATTTTTCGCTTAACATGAGATGGTACATCACTATTCTCATGGATCGTGTA 794
Qy 790 AGATAGCATGATGATCTCCATCTGGCAACAAGATTTCTATCTCTGCTGGATCAATGCT 849
Db 795 AGGTGAGATGATGATCTCCATCAGGGATTAAGGATTTCAATTCAGCCCTGGATCAAGTACT 854
Qy 850 CAGTTCAAGCACAGGTGAATCCCATATAATAGCATATCTATGATCTCTCCGAGGAGG 909
Db 855 CAGTCAGGCCCCAGGAGAAATACCATATGATGGGATTTATATGATCTCTGAGAGG 914
Qy 910 AGAAGTATGTTTCAAAAATCTCAGCCAAAGAGACCAAAATCACTTCGGAATTAAGT 969
Db 915 TAAAGTATGTTTCAAGCATGCGCAACCTTAACAGCAAAATCAATTCGGGATATAGAA 974
Qy 970 CGCAGTTGGATGATGATGAGTACGGAGCCAGTAAATTAACACATATGCCAATTTAGAGATG 1029
Db 975 CACATGTCGGAATGATGAGCCCGGAACCGAAGATAACACATATGTAACCTTTAGGGATG 1034
Qy 1030 ATGTGCTTCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAAGCTCATGGCTATTTCAAG 1089
Db 1035 AAGTCTCCCAAGATATAAAAACCTTGGATACAATGCGAGTCAAAATATGGCAATCCAAG 1094
Qy 1090 AGCATTCATATGATGATGTTGGGTATCAGTCAAAACCTTTATGAGCTAGCAGCC 1149
Db 1095 AGCATCTCATATGATGAGGCTTGGATACCATGTAATTAATTTTTCGCCCAAGTAGTC 1154
Qy 1150 GATTTGGACCTCTCATGATTTAAAGTCTCTAATAGATAAGCTCAAGTAGTACTGCTTC 1209
Db 1155 GTTTTGGTACCCCAAGAATTTGAAGTCTTTGATGATAGAGACATGAGCTTGGTTTGC 1214
Qy 1210 TTGTTCTCATGATATGTTTCATAGCCATGCAATCAACTAATACGTTGGATGGCTGAATA 1269
Db 1215 TAGTTCTCATGATGTTTCAATGATGCTGCTCAAGTAATTAATCTGGATGGTGAATG 1274
Qy 1270 TGTGATGTTACGAGTGTCTACTTTCACTCTGGAACCGGGTCAATGAGTGT 1329
Db 1275 GTTTTGTGTTACAGATACACATTAATTTCAAGTGGTCCAGTGGCCATCACTGGATGT 1334
Qy 1330 GGGACTCTGCTTTTCAACTATGGAGCTGGAGGTTCTAAGGTTTCTTCTTCAAGT 1389
Db 1335 GGGATTTCTGCTTATTAATGATGGAACTGGGAAGTTTAAAGATTTCTTCTTCAAGT 1394
Qy 1390 CAAAGTGTGTTGGATGATGATCAAGTGTGATGGGTTTCAAGTGTGATGGGTTGACTTCAA 1449
Db 1395 CTAGATGTTGCTCGAGNAATAGTTTGAAGTTTCCGTTTGAATGGTGTGACTTCCA 1454
Qy 1450 TGATGTACACCATCATGATGATGAGTATGATTTTACCGGCAACTTCAATGAATCTTTG 1509
Db 1455 TGATGTACACTCATCAGCAATTAAGTAACATTTACGGGAACTTCAATGATGATTTTG 1514
Qy 1510 GATATGCAACTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1569
Db 1515 GCTTTGCCACCATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1574
Qy 1570 GTCTCTTCCAGAGCTGTCACTATGTTGAGATGTTAGTGGAAATGCAACAGTTTCCA 1629
Db 1575 GACTTTATCTGAGGCTGTACCATTTGGTGAAGATGTTAGTGGATGCTTACATTTGCC 1634
Qy 1630 TTCCGGTTGAAGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 1689
Db 1635 TTCTCTGTTCAAGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGA 1694
Qy 1690 AATGGTTGAGATTTTACAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATG 1749
Db 1695 AATGATTTGACCTTCTCAAGCAAGATGATGATGATGATGATGATGATGATGATGATGATG 1754
Qy 1750 TGCTGACCAACAGGCGGTTGGGAAAGTGTGTTTCTTATGCTGAAAGTCAATGACCAAG 1809
Db 1755 CACTGACCAATAGGAGGTTGGTGAAGAGTGTGTAACCTTATGCTGAAAGTCAATGATCAAG 1814
Qy 1810 CCTTGTGTTGAGCAAAATCTATTTGCTGATGATGATGATGATGATGATGATGATGATGATGATG 1869

Db 1815 CATTAGTCGGCCACAAGACTATTGGTGTGATGAGCAAGGATATGATGATTTCA 1874
Qy 1870 TGGCTCTTGACAGACCTACTACTCTCTCTATAGATCGTGGAGTAGCATTTGCACAAAATGA 1929
Db 1875 TGGCCCTCGATAGACCTTCAACTCTTCACTTGTATGATCGTGGATAGCATTACATAGATGA 1934
Qy 1930 TCAGGCTTATTACCATGGGATTTAGCGGAGAGGATATTTGAAATTTTATGGGAAATGAAT 1989
Db 1935 TTAGACTTATCACAATGGGTTTAGGAGAGAGGGCTATCTTAAATTTTATGGGAAATGAT 1994
Qy 1990 TTGAGACCCCGAGTGGATTTTCCAGAGAGTGTATACATCTTCCAGTGGTAAAT 2049
Db 1995 TTGACATCTCTGAATGATAGATTTTCCAGAGGTCCGAAAAGACTTCCAAAGTGGTAAAT 2054
Qy 2050 TTGTTCTTGGGAACTTACAGTTATGATAAATCCGCGTAGTGTGATCTAGGCAAT 2109
Db 2055 TTATTCAGGNAATACACAGTTTATGACAAATGTCTCGAAGATTTGACCTGGGTGATG 2114
Qy 2110 CAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGTCAAGCAATTCAGCATCTTGAAG 2169
Db 2115 CAGACTATCTTAGGTATCATGTTATGCAAGAGTTTGTATCAGGCAATGCAACATCTTGAGC 2174
Qy 2170 AAGCTATGTTTTCATGATCTTGCAGCACCAATACATATCAGGAGGATGAAAGGATC 2229
Db 2175 AAAAATATGAATTCATGACATCTGATCACCAGTATATTTCCCGGAAACATGAGGAGATA 2234
Qy 2230 GGATCATTTCTTCGAGAGGGGAAACCTCGTTTTTGTATTCATTTTTCATTGGACTAGCA 2289
Db 2235 AGGTGATGTTTTCGAAAAGGAGATTTGGTATTTGTTTCACTTCCACTGCAACAACA 2294
Qy 2290 GCTATTCCGATTTACCGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAGATAGTCTTGGAT 2349
Db 2295 GCTATTTTGTACTCCGATTTGGTTTGTGAAAAGCTGGGGTGTATAAGGTGCTTTGGACT 2354
Qy 2350 CAGATGATCTTTTGTGGAGGCTTTTGGAGGCTTTAGTATGATGATGATGATGATGATGATG 2409
Db 2355 CCGACGCTGGACTATTTGGTGGATTTAGCAGGATCCATCAGCAGCCGAGCACTTCCCG 2414
Qy 2410 TTGAAGGCTGTGATGATAACCGGCTCGATCTTTCATGTTGTACACACCATGTAGAACAG 2469
Db 2415 CCGACTGTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 2474
Qy 2470 CAGTGGTCTATGCTTTTAGTGGAG 2492
Db 2475 GTGTGCTATGCTCCAGTGGAG 2497

RESULT 4

US-09-731-166-9
; Sequence 9, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
; APPLICANT: Sewalt, Vincent J. H.
; APPLICANT: Singletary, George W.
; TITLE OF INVENTION: Production of Modified Polysaccharides
; FILE REFERENCE: 35718/206348
; CURRENT APPLICATION NUMBER: US/09/731.166
; PRIOR FILING DATE: 2000-12-06
; PRIOR APPLICATION NUMBER: 60/169,993
; PRIOR FILING DATE: 1999-12-06
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 2446
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: SBE11a
; OTHER INFORMATION: Genbank Accession No. 6639126 U65948
; NAME/KEY: CDS
; LOCATION: (2)...(2446)

US-09-731-166-9

Query Match		48.4%;	Score 1251.8;	DB 4;	Length 2446;
Best Local Similarity		75.0%;	Pred. No. 0;		
Matches 1565;		Conservative 0;	Mismatches 522;	Indels 0;	Gaps 0;
Qy	417	AAACCAAGTCCATTCTCCACCGGAGAGGGCAAGAATATATGACATAGATCCCAAGC	476		
Db	356	AAACCAAGATTATCCCAACCAAGGAGATGGCAAGATATATGAGATTGACCCAAATG	415		
Qy	477	TGACAGGCTTTGCTCAACACCTAGATTACCGGTATTCACAGTACAAAGACTCCGAGAA	536		
Db	416	TTGGAAGGGTTTCGGGGTCACTTGAATACCGATACAGTGAATATAAGAGATTACGTGCG	475		
Qy	537	GAATTTGACAGTATGAAGTATGCTGATGCAATTTCTCGTGCTATGAAGATTGGT	596		
Db	476	GCTATTGATCAACATGAAGTGGTTTGGATGCAATTTTCACGGGTACGAAAGCTTGGG	535		
Qy	597	TTCTCACGACGTGAAACAGGAATAACTTATAGAGAGTGGGCAACGAGGACTACGTGGGCT	656		
Db	536	TTTACTCGCAGCGCTGAAGGTATCACTTACAGAGATGGGCTCTCGAGCATACTCTGCA	595		
Qy	657	GCATTGATGGAGATTTCATTAACATGGAACTCTTAATGCAGATGTCATGACTCAGAATGAG	716		
Db	596	GCATTAGTAGTGACTTCAACAACTGGAAACCAATGCTGATGCTATGGCCAGAGAAATGAG	655		
Qy	717	TGTGGTCTCGGAGATCTTTTGGCGNATTAATGCAGATGGTTCAACCACAAATTCGCCAT	776		
Db	656	TACGGCGTTTGGGAGATTTCTCGCTTAAACATGCTGATGGTTCCCTGCTATTTCCTCAT	715		
Qy	777	GGTTCTCGAGTAAGATACGATGACTCCATCTCGGCAACAAAGATTCTATTTCCTGCT	836		
Db	716	GGCTCACGTGTAAGATACGATGGACACACATCTGCTGTGTAGGATTCATTTCTCTGCC	775		
Qy	837	TGGAATCAAGTTCTCAGTTCAAGCACCGAGTGAATCCCATATAATATGGCATATATGAT	896		
Db	776	TGGATCAAGTTTCTGTGAGGCTCCAGGTGAAATACCATCAACCGGTATATATATGAC	835		
Qy	897	CTCCCGAGGAGGAGATGATGTCTCAAAATCTCGACCAAGAGACCAAAATCACTT	956		
Db	836	CCACTGAAGAGGAGAAATATGTATTCAAACACCCCTCAACCTTAAGCGGCCCAAGTCACTG	895		
Qy	957	CGGATTTATGATGTCGACCTTGGGAATGATGATGACGAGCCAGTAATTAACACATATGCC	1016		
Db	896	CGGATATATGATCACATGTTTGGATGATGATGAGCCGGACCAAGATATAATATATGCT	955		
Qy	1017	AACTTTAGAGATGATGCTTCTCGCATCAAAAGCTTGGCTCAATGCTGTTCAGCTC	1076		
Db	956	AACTTACAGATGAGGTCTTCCAAGAAATTAAGAAAGCTTGGATACAATGCAATGCAAGTACAGATA	1015		
Qy	1077	ATGGCTATTCAAGACATTCATATATATGCTAGTTTGGGTATCAGTCAACAACTTTTAT	1136		
Db	1016	ATGGCAATCCAGGAACACTCTTATATGCAAGCTTTGGGTACCATTGTACGAAATTTTTTT	1075		
Qy	1137	GCAGCTAGCAGCCGATTTGGAACTCTGATGATTTAAAGTCTCTAATAGATAAAGCTCAC	1196		
Db	1076	GCCCAAGTAGCGGTTTGGGACTCCAGAGACCTAAATCTCTTATTGATTAAGCCGAT	1135		
Qy	1197	GAGTTAGGCTCTTGTGTTCTCATGATATGTTTATAGCCATGATCACTAATACGTTG	1256		
Db	1136	GAGCTTGGCTTGTAGTCTTATGGAATTTGTTTATAGTTCATTCATCAATAATACCTTG	1195		
Qy	1257	GATGGCTGAATATGTTTATGATGATCGGATGGTCACTACTTTTCACTCGGACACGGGGT	1316		
Db	1196	GATGGTTTGAATGGTTTTCGATGGCACCGATACATTAATCTTCCATGGTGGTCCAGAGGC	1255		
Qy	1317	CATCATTTGGATGTGGGACTCTCGCTTTTCAACTATGGGAGCTGGGAGTTTCTAAGSTTT	1376		
Db	1256	CATCATTTGATGTGGGATTTCTCGCTTATTCATTTATGGAGTTGGGAGTTTTCGATTT	1315		
Qy	1377	CTTCTTTCAAAATGCAAGTGGTGGTGGATGAGTACAAAGTTTGTATGGGTTGAGATTGAT	1436		
Db	1316	CTATTGTCAAAATGCGAGATGGTGGCTTGAAGAAATATAAAATTTTGTGGGTTTCGATTTGAT	1375		

Qy	1437	GGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTAC	1496		
Db	1376	GGGTGACCTCCATGATGATATATCTCACCATGGATTACAGTGACATTCACCTGGGAATAT	1435		
Qy	1497	AATGAATPACTTTGGATATGCAACTGATGATAGTCTGTGGTTTATTTTATGATGCTGTGAAT	1556		
Db	1436	GGCGAGTATTTTGGATTTGGCACTGATGTTGATGCGAGTATTTTACCTTAATGCTGGTAAAC	1495		
Qy	1557	GATATGATTCATGGTCTCTTCCAGAGGCTGTCCCAATTCGTTGGTGAAGATGTTAGTGGAAATG	1616		
Db	1496	GATCTATTTCGCGCTTTATCCAGAAGCTGTATCCATTCGCGCAAGATGTACGCGGAATG	1555		
Qy	1617	CCAAACGTTTGCATTCGGGTTGAAGATGTTGGCTTGTGGCTTGTGATATCGTCTCCACATG	1676		
Db	1556	CCTACATTTTGTATCCCTGTCGAAGATGTTGGTGTGGTTTGTGATATCGTCTCTCATATG	1615		
Qy	1677	GCTGTTCTGATAAATGGGTTGAGATTTATTTACAGAAGAGATGAAGATTCGAAATCGGT	1736		
Db	1616	GCTGTCCAGACAAATGGATTGAATTTCTCAAGCAAAAGTGACGAATATTGGGAATCGGT	1675		
Qy	1737	GACATTTGATATGCTGACCAACAGCGCGTGGTTGAAAAGTGTGTTTCTTATGCTGAA	1796		
Db	1676	GACATCGTGACACCTTTAAACAAATAGAAGTGGCTTGAAGAGTGTGTCACTTATTTGTA	1735		
Qy	1797	AGTCATGACCAAGGCCCTTGTGTTGTGACAAAACATTTGCAATTTTGGCTGATGGACAAGAT	1856		
Db	1736	AGTCATGATCAGCTCTTGTGTTGTGACAGCAATTCATCTCTGTTGATGGATGAAGAT	1795		
Qy	1857	ATGTATGACTTTCATGGCTCTTGAACACCATCTACTCTCTCATAGATCGTGGAGTAGCA	1916		
Db	1796	ATGTATGATTTTCATGGCTCTGGAACAGGCCCTTCAAGGCTCGCATCGATCGTGGGATAGCA	1855		
Qy	1917	TTGCACAAATGATCAGGCTTATTAACATGGGATTAGCCGAGAGAGATATTTTGAATTTT	1976		
Db	1856	TTACATAAATGATTAGGCTTGTCAACATGGGTTTAGAGGTTGAAGGCTATCTAAATTTT	1915		
Qy	1977	ATGGGAATGAAATTTGGACACCCGAGTGGATTGATTTTCCAAAGAGTGTATCTACATCTT	2036		
Db	1916	ATGGGAATGAGTTTGGGCTCTCTGATGATGATAGATTTTCCAGAGGCTCTCAAGTCTT	1975		
Qy	2037	CCAGTGGTAAATTTGTTCTCGGGAACAAATTAACAGTTATGATAAATCCGCGGTAGGTTT	2096		
Db	1976	CCAAATGGCTCCGTCATTCTCTGGGAATAACAATAGCTTTGATAAATCCGCGGTAGATTT	2035		
Qy	2097	GATCTAGGCAATTCAAAGCATCTGAGATATCATGGATGCAAGGTTTGTATCAAGCAATT	2156		
Db	2036	GACCTTGGAGATCGAGATTATCTTAGATATCGTGGTATGCAAGAGTTTGACCGCAATG	2095		
Qy	2157	CAGCATCTTCAAGAAGCTATGTTTTCATGACTTCTGAGCACCAATACATATACCGGAAG	2216		
Db	2096	CAGCACCTTGGGGAATAATGAATTCATGACATCTGATCCTCATATGATATCACGGAG	2155		
Qy	2217	GATGAAGGATCGGATCATTTGTTCTTCAGAGGGGAAACCTCGTTTTTGTATCAATTTT	2276		
Db	2156	CATGAGGAGATAAGGTGATCATCTTTGAGAGAGGAGATTTGGTCTTTCGTGTTCAACTTC	2215		
Qy	2277	CATTGGACTAGCAGCTATTCCGATTACCGAGTTGGCTGCTTAAAGCCAGGAAGTACAAG	2336		
Db	2216	CATGGAGCAATAGCTATTTTGACTATCGCGTGTGGTTGTTTCAAGCCTGGGAAGTACAAG	2275		
Qy	2337	ATAGTCTTGGATTACAGATGATCTTTTGTGTTGGAGGCTTTTGGCAGGCTTTAGTCATGATGCA	2396		
Db	2276	ATCGTTTTAGATTCTGACGATGGCTTTTCGTGGATTAGTCGCTTTGATCATGATGCC	2335		
Qy	2397	GAGCACTTACGCTTGAAGGGTGGTACGATAAACCGGCTCGATCCCTTCATGCTGTACACA	2456		
Db	2336	GAGTACTTCACTGCTGATCGCGCATGACAAACAGGCGGTGTTCTTTCTCGCTCATGCA	2395		
Qy	2457	CCATGTAGAACACGAGTGGTCTATGCTTTTGTAGTGAGGATGAAGTGA	2503		
Db	2396	CCAGCAGAAACAGCCGCTGATATATGCACTTGCAGGTCGAGGACGA	2442		

RESULT 5
US-09-257-894-1
; Sequence 1, Application US/09257894
; Patent No. 6376749
; GENERAL INFORMATION:
; APPLICANT: Broglie, Karen E.
; APPLICANT: Klein, Theodore M.
; APPLICANT: Hubbard, Natalie L.
; APPLICANT: Lightner, Jonathan E.
; TITLE OF INVENTION: No. 6376749el Starches via Modification of
; TITLE OF INVENTION: Expression of Starch Biosynthesis
; TITLE OF INVENTION: Enzyme Genes
; NUMBER OF SEQUENCES: 25
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E. I. du Pont de Nemours and Company
; STREET: 1007 Market Street
; CITY: Wilmington
; STATE: Delaware
; COUNTRY: USA
; ZIP: 19898
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: Microsoft Windows 95
; SOFTWARE: Version 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/257,894
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/091,052
; FILING DATE: JUNE 10, 1998
; ATTORNEY/AGENT INFORMATION:
; NAME: Majarian, William R.
; REGISTRATION NUMBER: 41,173
; REFERENCE/DOCKET NUMBER: BB-1066-A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-992-4926
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2665 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 79..2476
US-09-257-894-1

Query Match 48.4%; Score 1251.8; DB 4; Length 2665;
Best Local Similarity 75.4%; Pred. No. 0;
Matches 1556; Conservative 0; Mismatches 507; Indels 0; Gaps 0;
Qy 430 TTCTCCACCGGAGCGGCAAGATATATGACATAGATCCAGCTTGACAGCTTTC 489
Db 413 TCCCCCACCAGCGATGACAAATATTCAGATTGACCCATGTTCAGAGCTATA 472
Qy 490 GTCAACACCTAGATTACCGGTATTACAGATCAAAAGACTCCGAGAGAAATTCACAGT 549
Db 473 AGTACCATTCTTGAGTATCGGTACAGCTCTATAGAAGATCCGTTTCAGACATTGATGAC 532
Qy 550 ATGAAGGTAGTCTGGATGCAATTTCTCGTGCTATGAAAGTTTGGTTTCTCAGCGAGTG 609
Db 533 ATGAAGGAGGCTTGAAGCCTTCTCCCGTAGTTATGAGAAGTTTGGATTATGCCACGC 592
Qy 610 AAACAGGAATAACTTATAGAGATGGGACCCAGGAGCTACGTGGGCTGCATTGATTGGAG 669
Db 593 CGGAAGGTATCACATATCGAAGTGGGCTCTCGAGACATTTTCTGAGCATTTGGTGGTG 652
Qy 670 ATTTCAATACTGGAATCCTAATGCAGATGTCATGACTCAGAAATGAGTGTGCTCTGGG 729

Db 653 ACTTCAACAACTGGGATCCAAATCGATCGATGAGCAAAATGAGTTTGGTGTGGG 712
Qy 730 AGATCTTTTTCGCCAATATGACAGATGGTTCACCAACCAATTCGCCATGGTTCGAGTAA 789
Db 713 AAAATTTTCTGCTTAAACAATGACAGATGGTACATCACCTATTCTCCTCAGATGATCTCGTGTAA 772
Qy 790 AGATACCGCATGGATACCTCCATCTGGCAACAAGATTTCTATTCTCTGCTGGATCAAGTTCT 849
Db 773 AGGTGAGATGGATACCTCCATCAGGATTAAGGATTCATTCAGCCCTGGATCAAGTACT 832
Qy 850 CAGTTCAAGCACCAAGGTGAACCTCCATATATGATGATATATGATGATCTCCCGAGGAGG 909
Db 833 CAGTGCAGGCCCCAGGAGAAATACCATATGATGAGGATTTATTATGATCCTCTCTGAAGAGG 892
Qy 910 AGAAGTATGTTTCAAAAATCTTCAGCCAAAGACCAAAATCACTTCGGATTTATGAGT 969
Db 893 TAAAGTATGTTTTCAGGCATGCGCAACCTTAACACCAAAATCAATTCGGGATATGAAA 952
Qy 970 CGCACGTTGGAATGAGTAGTAGCGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATG 1029
Db 953 CACATGTCGGAATGAGTAGCGCGGAAACCGAAGATAAACAATATGTAACCTTTAGGGATG 1012
Qy 1030 ATGTGCTTCTCGCATCAAAAAGCTTGGCTACAATGCTGTTGAGTTCAGCTCATGCTATTCAAG 1089
Db 1013 AAGTCTCTCCCAAGAAATAAAAAAATCTTGATACAATGAGTGCATAATGCAATCCAAG 1072
Qy 1090 AGCATTCATATATGCTAGTTTGGGTATCAGCTCACAAACTTTTATGACAGTACGACCC 1149
Db 1073 AGCACTCATATATGGAAGCTTTGGATACCATGTAACCTAAATTTTTCGCGCAAGTAGTC 1132
Qy 1150 GATTGGAACTCTCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACAGTTAGTCTTTC 1209
Db 1133 GTTTTGTACCCAGAGAATTTGAAGTCTTTGATTGATAGACACATGAGCTTGTTGC 1192
Qy 1210 TTGTTCTCATGGATATTTTCATAGCCATCAACTAATACCTAATACCTTGGATGGGCTGAATA 1269
Db 1193 TAGTTCTCATGGATGTTGTTTCATAGTATGCGTCAAGTAATACCTCTGATGGGTTGAATG 1252
Qy 1270 TGTGTTGATGTTAGGATGTTGCTACTTTCATCTGACCAACCGGGTCACTCATTTGGATGT 1329
Db 1253 GTTTTGTGTTGATGATGATACATTTTACAGTGTGTCACGTTGGGCTCACCTGAGTGT 1312
Qy 1330 GGGACTCTCGCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTCTTTCAAATG 1389
Db 1313 GGGATCTCGCTATTAACTATGGGAACCTGGGAAGTTTAAAGATTCTCTCTCCAAATG 1372
Qy 1390 CAAGGTGTTGGTGGATGATGATCAAGTTTGTATGGTTTCAAGTTGATGGGTTGACTTCAA 1449
Db 1373 CTAGATGGTGGCTCGAGGAATAAAGTTTGTATGGTTTCCGTTTGTGATGGTGGACCTCCA 1432
Qy 1450 TGATGTACACCCATCATGGATTGCGAGTATGTTTACCGGCAACTACAATGAATACATTG 1509
Db 1433 TGATGTACACTCACCGGATTAACAGTAACATTTACGGGGAACCTTCAATGAGTATTTTG 1492
Qy 1510 GATATGCAACTGATGTAGATGCTGTGGTTTATTTGATGCTGTGTAATGATGATGATTCATG 1569
Db 1493 GCTTTGACCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1552
Qy 1570 GTCTTTTCCAGAGGCTGTCACTATGGGTGAAGATGTTAGTGAATGCCAACAGTTTGGCA 1639
Db 1553 GACTTTATCTGAGGCTGTAAACCATTTGGTGAAGATGTTAGTGAATGCCATACATTTGCC 1612
Qy 1630 TTCCGGTTGAAGATGGTGGTGGCTTTCATGATGATGATGATGATGATGATGATGATGATGATG 1689
Db 1613 TTCTGTTCAGATGGTGGGTTAGTTTGAATATGATGATGATGATGATGATGATGATGATGATG 1672
Qy 1690 AATGGGTTGAGATTATTCAGAAAGATGATCAAGATTCGAAAATGGGTGACATTTGACATA 1749
Db 1673 AATGGATTGACCTTCTCAACCAAGTATGATGATGATGATGATGATGATGATGATGATGATG 1732
Qy 1750 TGCTGACCAACAGCGGCTGTTGGAAAAGTGTGTTCTTATGCTGAAAAGTCAATGACGAG 1809

Db 1733 CACTGACAAATAGGAGGTGGTTAGAGAAAGTGTGTAACTTATGCTGAAAGTCATCATCAAG 1792
Qy 1810 CCCTTGTGGTGCACAAACTATTGCAATTTTGGCTGATGGACAAGGATATGTGACTTCA 1869
Db 1793 CATTAAGTCGGGACAAAGACTATTGGTTTGGTTGATGGACAAGGATATGTGACTTCA 1852
Qy 1870 TGGCTCTTGCAGACCACTACTCTCTCATAGATCGTGGAGTAGCATTTGCACAAAATGA 1929
Db 1853 TGGCCCTCGATAGACCTTCACTCTCCTACCTGATGCTGGATAGCATTAATAGATGA 1912
Qy 1930 TCAGGCTTATTAACCATGGGATTAAGCGGAGAGGATATTGCAATTTTATGGCAATGAAT 1989
Db 1913 TTAGACTTATCAAAATGGGTTTAGGAGGAGGGGCTATCTTAATTTTCATGCGAAATGAT 1972
Qy 1990 TTGGACACCCGAGTGGATTCATTTTCCAAAGGTGATCTACATCTTCCCGAGTGGTAAT 2049
Db 1973 TTGGACATCTTGAATGGATAGATTTCCAAGAGGTTCGCAAGACTTCCAAAGTGGTAAT 2032
Qy 2050 TTGTTCTCTGGGAAACAATTACAGTTTATGATAAATGCCGCGTAGGTTTGTATCTAGGCAATT 2109
Db 2033 TTATTCAGGGANPAACAAGTATTGACAAATGTCTCGAAGATTGACCTGGGTGATG 2092
Qy 2110 CAAGACTCTGAGATATCATGGAATGCAAGAGTTTGTATCAAGCAATTCAGCATCTTGAAG 2169
Db 2093 CAGACTATCTTAGGTATCATGGTATGCAAGAGTTTGTATCAGGCAATGCAACATCTTGAGC 2152
Qy 2170 AAGCTATGTTTCATGACTTCTGAGCACCAATACATATCACGGAAGGATGAAAGGATC 2229
Db 2153 AAAAATATGAATTCATGACATCTGATCACCAGTATATTTCGCGAAACATGAGGAGATA 2212
Qy 2230 GGATCATTTGTTTCGAGAGGGGAAACCTCGTTTGTATTCAATTTTCATTTGGACTAGCA 2289
Db 2213 AGGTGATTTGTTTCGAAAAGGAGATTGTTGTTATTTGTTTCACTTCACATGCAACA 2272
Qy 2290 GCTATTCGATTAACGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAAGATGCTTGGATT 2349
Db 2273 GCTATTTTGACTACCGTATGTTGTTGTCGAAAGCCTGGGGTGTATAAGGTGCTTTGACT 2332
Qy 2350 CAGATGATCCTTTGTTTGGAGGCTTGGCAGGCTTAGTCATGATGCGAGACATTCAGCT 2409
Db 2333 CGAGCTGAGGACTATTTGGTGATTTAGCAGATCCATCAGCAGCGGAGCATTACCG 2392
Qy 2410 TTGAAGGCTGTTACGATAACCGGCTCGATCCTTCATGTTGTACACACCATGTAGAA 2469
Db 2393 CCGACTGTTTCGATGATTAATAGGCAATTCATCTCGTTTATACACCAAGCAGACAT 2452
Qy 2470 CAGTGGTCTATGCTTTAGTGGAG 2492
Db 2453 GTGCTGCTATGCTCCAGTGGAG 2475

RESULT 6

US-08-941-445A-14
; Sequence 14, Application US/08941445A
; Patent No. 6107060
; GENERAL INFORMATION:
; APPLICANT: Keeling, Peter
; APPLICANT: Guan, Hanping
; TITLE OF INVENTION: Starch Encapsulation
; NUMBER OF SEQUENCES: 37
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Greenlee, Winner and Sullivan, P.C.
; STREET: 5370 Manhattan Circle
; CITY: Boulder
; STATE: CO
; COUNTRY: US
; ZIP: 80303
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/941,445A
; FILING DATE: 30-SEP-1997
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/026,855
; FILING DATE: 30-SEP-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Winner, Ellen P
; REGISTRATION NUMBER: 28,547
; REFERENCE/DOCKET NUMBER: 89-97
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (303) 499-8080
; TELEFAX: (303) 499-8089
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2725 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: mRNA
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: sig_peptide
; LOCATION: 91..264
; FEATURE:
; NAME/KEY: mat_peptide
; LOCATION: 265..2487
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 91..2490
; US-08-941-445A-14

Query Match 48.4%; Score 1251.8; DB 3; Length 2725;

Best Local Similarity 75.4%; Pred. No. 0;
Matches 1556; Conservative 0; Mismatches 507; Indels 0; Gaps 0;

Qy 430 TTCTCCACCGGAGGCGCAAGATATATGACATAGATCCAAAGCTTCACAGGCTTTC 489
Db 425 TCCCCCACCAGGATGGACAAAATATTCAGATTGACCCCATGTTGCNAGGCTATA 484
Qy 490 GTCAACACCTAGATTACCGGTATTACAGTACAAAAGACTCCGAGAGAAATTCACAAGT 549
Db 485 AGTACCATTCTTGAGTATCGGTACAGCCTCTATAGAGAAATCCGTTACAGATTCATGAAC 544
Qy 550 ATGAGGTAGTCTGGATGCATTTTCTCGTCTATGAAAAGTTTGGTTTCTCAGCAGTG 609
Db 545 ATGAAGGAGGCTTGGAAAGCCTTCTCCGTTAGTTATGAGAAAGTTTGGATTTAATCCAGCG 604
Qy 610 AAACAGGAATAACTTATAGAGAGTGGGCACAGGAGCTACGTGGGCTGCATTGATTGGAG 669
Db 605 CGNAGGTATCACATATCGAGATGGGCTCTGGAGCATTTTCTGCAGCATTTGGTGGTG 664
Qy 670 ATTTCAATAACTGGAATCCTTAATGACAGATGTCACTGACTCAGAATGAGTGTGCTCGGG 729
Db 665 ACGTCAACAACCTGGATCCAAATGCAGATCGTATGAGCAAAAATGAGTTTGGTGTGGG 724
Qy 730 AGATCTTTTTCGCAATAATGACAGATGGTTTCCACCACCAATTTCCCATGTTCTCGAGTAA 789
Db 725 AAATTTTCTGCTTAAACAATGACAGATGGTATCACCCTATTCCTCATGGATCTCGTGTA 784
Qy 790 AGATACGATGGATACCTCCATCTGGCAACAAAGATTTCTATTCCTGCTGGATCAAGTTCT 849
Db 785 AGGTGAGATGGATACCTCCATCAGGATTAAGGATTCATTCAGGCTGGATCAAGTACT 844
Qy 850 CAGTTCAAGCACCAAGGTGAACCTCCATATTAATGSCATATATGATGATCTCCCGAGGAG 909
Db 845 CAGTGCAGGCGCCAGGAGAAATACCATATGATGGGATTTTATATGATCTCTCTGAAGAG 904
Qy 910 AGAGTATGTGTTCAAAAATCCCTCAGCCAAAGACCAAAATCACTTCGAGTTTATGAT 969
Db 905 TAAAGTATGTGTTCCAGGATGCGCAACCTTAACGACCAAAATCATTTGCGGATATATGAA 964

Qy 597 TTCTCAGCAGTGAAACAGGAATAACTTATAGAGATGGGCACACAGAGCTACGTTGGCT 656
Db 604 TTTATCCCGAGTGTGAAGGTATCACTTACCGAGATGGGCTCTCTGGAGCGCATTTGCA 663
Qy 657 GCATTGATTTGGAGATTTTCAATACTGGAATCCTAATGCAGATGTCTGATCTCAAGATGAG 716
Db 664 GCATTAGTAGTGACTTCAACAAATTTGGAATCCAAATGCAGATGTCTATGACACAGAGATGAT 723
Qy 717 TGTGGTGTCTGGAGATCTTTTGGCCGAAATATGCAGATGTCTCACCCAAATTTCCCAT 776
Db 724 TATGGTGTTTGGAGATTTTCTCTCCCTAAACCGCTGATGGATCTCTGCTATTTCTCAT 783
Qy 777 GGTCTCCAGTAAAGATACGATGATCTCCATCTGCGCAACAAAGATTTCTATTTCTGCT 836
Db 784 GGCTCACGTGTAAAGATACGAGATGATCTCCATCCGGTGTGAAGATTTCAATTTCTGCT 843
Qy 837 TGGATCAAGTCTCTCAGTTCAAGACACAGGTGAACCTCCCATATAATGGCATATACATGAT 896
Db 844 TGGATCAAGTCTCTCTGTCAGGCTCCAGGTGAATACTCTTCAATGGCATATATATGAT 903
Qy 897 CCTCCGAGGAGGAGATGTGTCTCAAAATCTCTAGCCAAAGAGACCAAAATCACTT 956
Db 904 CCACCTGAAGAGGAGATGTGTCTTCCAAATCTCTCAACCTCAACCTAAACCGACAGAGTCACTA 963
Qy 957 CGGATTTATGATGTCGACGTTGGATAGTAGTAGTACGGAGCCAGTAATTAACACATATGSC 1016
Db 964 AGGATTTATGATCAATTTGGATAGTAGTAGTACGGAGCCAGGACCAAGATTAATTCATATGCT 1023
Qy 1017 AACTTTAGAGATGATGTCTCTCGCATCAAAAGCTTTGGCTACAAATGCTTTGAGCTC 1076
Db 1024 AATTTAGGATGAGTGTCTGCAAGATTTAAAGGCTTTGGATCAATGCAAGTGCAGATA 1083
Qy 1077 ATGGCTATTCAAGACCATTTATATCTAGTTTGGGTATCAGCTCACAAATCTTTAT 1136
Db 1084 ATGGCAATCCAGGAGCATTTCACTATATCAAGCTTTGGGTACCAATGTTACTAATTTT 1143
Qy 1137 GCAGCTACAGCCGATTTGGAACTCTCATGATTTAAAGTCTCTAATAGATAAAGCTCAC 1196
Db 1144 GCACCAAGTAGCGTTTGGAACTCCAGAGACTTAAATCTTGATCGATAGAGCAT 1203
Qy 1197 GAGTTAGCTCTTTGTTCTCATGATTTGTTCATAGCCATGATCAATCAATGCTTTG 1256
Db 1204 GAGCTTGGTTGTTGTTCTTATGATTTCTTATGATTTCTTATAGTCACTCTGTAATACCTT 1263
Qy 1257 GATGGCTGAATATGTTTGTAGTGTACGATGGTCACTACTTTTCACTCTGACACAGGGGT 1316
Db 1264 GACGGTTTGAATGGTTTCCGATGGCACTGATACACATTAATTTCCAGGGTGGTCCACGGGGC 1323
Qy 1317 CATCATTTGGATGTGGACTCTCGCTTTTCAACTATAGGAGCTGGGAGTTTCTAAGGTTT 1376
Db 1324 CATCATTTGGATGTGGATTTCTGCTATTTCACTATAGGAGTTGGGAAGTATTGATTC 1383
Qy 1377 CTCTTTTCAAAATGCAAGTGGTGGTTGGATGAGTACAAGTTTGTAGTGGTTCAGATTTGAT 1436
Db 1384 TTACTGTCAAAACGAGATGGTGGCTTGAAGATATAATTTTGTATGGATTTTCGATTTGAT 1443
Qy 1437 GGGGTGACTTCAATGATGATACCCATCATGATGATGATGATGATGATGATGATGATGATGAT 1496
Db 1444 GGGGTGACTTCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1503
Qy 1497 AATGAATATCTTTGGATATGCAACTCATGATGATGATGATGATGATGATGATGATGATGAT 1556
Db 1504 GCGCAATATTTGGATTTGCTACTGATGATGATGATGATGATGATGATGATGATGATGATGAT 1563
Qy 1557 GATATGATTCATGCTCTCTCCAGAGGCTGTCAACATTTGGTGAAGATGTTAGTGGAAATG 1616
Db 1564 GATCTAAATTCAGGACTTTATCTCTGATGATGATGATGATGATGATGATGATGATGATGATGAT 1623
Qy 1617 CCAAGATTTGATTTCCGTTGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1676
Db 1624 CCTACATTTGATCCCTGTTCCAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1683

Qy 1677 GCTTGTCTGATAAATGGGTTGAGATTTATTCAGAAGAGAGATGAAGATTCGAAATCGGT 1736
Db 1684 GCTGTAGCAGATAAATGGAATTTGAACCTCTCAAGCAAAAGTGACGAATCTTGGAAAAATGGGC 1743
Qy 1737 GACATTTGATCATATGCTGACCAACAGCGCGTGGTTGGAAAGTGTGTTTCTTATGCTGAA 1796
Db 1744 GATATTTGTGCACACCCCTAAACAAATAAAGGTGGCTTGAAGATGTGTAACTTATGCAAGAA 1803
Qy 1797 AGTCATCAGCAGGCGCTTGTGGTGACAAATCTATTGCAATTTTGGCTGATGGACAAGAT 1856
Db 1804 AGTCATGATCAAGACACTAGTTGGTGACAGACTATTGCAATTTGTTGATGGATAGAT 1863
Qy 1857 ATGTATGACTTATGCTCTTGAAGACCACTATCTCTCTCATAGATCGTGGAGTAGCA 1916
Db 1864 ATGTATGATTTATGCTCTTGAAGACCACTATCTCTCTCATAGATCGTGGAGTAGCA 1923
Qy 1917 TTGCAAAATATGATCAGGCTTATTAACATGGGATTTAGGCGGAGAGATATTGCAATTTT 1976
Db 1924 TTACATAAAATGATCAGGCTTGTCCATGGGTTTAGGTGGTGAAGCTATCTTAACTTC 1983
Qy 1977 ATGGGAATCAATTTGGACACCCCGAGTGATTTTCCAAAGAGGTGATCTACATCTT 2036
Db 1984 ATGGGAATCAATTTGGGCTTGTCCCTGGAAATTAACAATAATTTATGATAATTCGCGCGGTAGATTT 2043
Qy 2037 CCCAGTGGTAAATTTGTTCTCTGGGAAACAATTAACAGTTTATGATAAATGCGCGGTAGATTT 2096
Db 2044 CCAACCGCAAGTTCTCTCCCTGGAAATTAACAATAATTTATGATAATTCGCGCGGTAGATTT 2103
Qy 2097 GATCTAGGCAATTTCAAGCATCTGAGATATCATGGAATGCAAGATTTGATCAAGCAATTT 2156
Db 2104 GATCTTGGAGATGCAAAATTTCTTAGATATCGTGGTATGCAAGATTTGATCAAGCAATTT 2163
Qy 2157 CAGCATCTCAAGAGCTTATGTTTCTGACCTTCTGAGCAACCAATACATATCACGGAAG 2216
Db 2164 CAGCATCTTGAAGAAATATGGTTTATGACATCTGAGCAACCAATATGTTTCAAGCAATTT 2223
Qy 2217 GATGAAAGGATCGGATCATTTGTTCTTCAAGAGGGAACCTCGTTTGTATTCATCAATTTT 2276
Db 2224 CATGAGGAAGATAAGGTGATCATCTTCTGAAAGAGGAGATTTGGTATTTGTTTCAACTTC 2283
Qy 2277 CATGGAAGTACGATTTTCCGATTTACCGATTTGGCTTTAAAGCCAGCAAGATGATCAAG 2336
Db 2284 CACTGGAGCAATAGCTTTTGTGACTACCGTGTGGGTGTTTCCAAAGCTTGGGAAGATGATCAAG 2343
Qy 2337 ATAGCTTTGATTCAGATGATCTTTTGTGGAGGCTTTTGGCAGGCTTTAGTCATGATGCA 2396
Db 2344 GTGGCTTTGACTCCGAGATGCACTCTTTGGTGGATTCAGAGGCTTTGATCATGATGTC 2403
Qy 2397 GAGCATTTGAGCTTTGAAGGGTGGTACGATACCGGCTCGATCTCTTTCATGTTGATGATCA 2456
Db 2404 GACTACTTCAACCCGAAACATCCGATGACACAGGCGCGCTCTTTCTCGGTGATCACT 2463
Qy 2457 CCATGTAGACAGAGTGGTCTATGCTTTAGTGGAGGATGAA 2498
Db 2464 CCGAGCAAGATCGGTCGTGTATGCTTACGCTTTACAGAGTAAGAA 2505

RESULT 8

US-09-257-894-9
; Sequence 9, Application US/09257894
; Patent No. 6376749

GENERAL INFORMATION:

APPLICANT: Broglie, Karen E.
APPLICANT: Klein, Theodore M.
APPLICANT: Hubbard, Natalie L.
APPLICANT: Lightner, Jonathan E.
TITLE OF INVENTION: Expression of Starch Biosynthesis
TITLE OF INVENTION: Enzyme Genes
NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: E. I. du Pont de Nemours and Company
STREET: 1007 Market Street

Db 1955 TTATTCAGGGAATAACAACAGTTATGACAAATGTCGTCGAAGATTTTGACCTGGGTGATG 2014

Qy 2110 CAAGCATCTGAGATATCATGGAATGCAAGAGTTTGTATCAAGCAATTCAGCATCTTGAG 2169

Db 2015 CAGACTATCTTAGGTATCATGATGCAAGAGTTTGTATCAGGCAATGCAACATCTTGAGC 2074

Qy 2170 AAGCCTATGGTTT 2182

Db 2075 AAAAATATGAATT 2087

RESULT 9

US-09-257-894-8/c

; Sequence 8, Application US/09257894

; Patent No. 6376749

; GENERAL INFORMATION:

; APPLICANT: Broglie, Karen E.

; APPLICANT: Klein, Theodore M.

; APPLICANT: Hubbard, Natalie L.

; APPLICANT: Lighner, Jonathan E.

; TITLE OF INVENTION: No. 6376749el Starches via Modification of

; TITLE OF INVENTION: Expression of Starch Biosynthesis

; NUMBER OF SEQUENCES: 25

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: E. I. du Pont de Nemours and Company

; STREET: 1007 Market Street

; City: Wilmington

; STATE: Delaware

; COUNTRY: USA

; ZIP: 19898

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: Microsoft Windows 95

; SOFTWARE: Version 7.0A

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/257,894

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 09/091,052

; FILING DATE: JUNE 10, 1998

; ATTORNEY/AGENT INFORMATION:

; NAME: Majarian, William R.

; REGISTRATION NUMBER: 41,173

; REFERENCE/DOCKET NUMBER: BB-1066-A

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 302-992-4926

; TELEFAX: 302-773-0164

; INFORMATION FOR SEQ ID NO: 8:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 2165 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: DNA (genomic)

US-09-257-894-8

Query Match 42.3%; Score 1095.4; DB 4; Length 2165;

Best Local Similarity 76.6%; Pred. No. 0;

Matches 1342; Conservative 0; Mismatches 411; Indels 0; Gaps 0;

Qy 430 TTCTCCACCGGAGAGGGCAAGAAATATGACATAGATCCAGCTTGACGGCTTTC 489

Db 1753 TCCCCCCCAAGCGATGACAAAAAATATCCAGATTGACCCCATGTTGCAAGGCTATA 1694

Qy 490 GTCAACACCTAGATTACCGTATTACACAGTACAAAAGACTCCGAGAAAGAAATTGACAAAGT 549

Db 1693 AGTACCATCTTGAGTATCGGTACACGCTCTATAGAAAGATCGTTTCAGACATTGATGAAC 1634

Qy 550 ATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAGTTTGGTTTCTCACCGAGTG 609

1633 ATGAAGGAGGCTTGGAGGCCTTCTCCGTAGTTTATGAGAAAGTTTGGATTTTAATGCCAGCG 1574

Qy 610 AAACAGGAATAAATTATAGAGAGTGGGCACACAGAGCTACGTGGGCTGCAATGATTCGAG 669

Db 1573 CGGAAGGTATCACATATCGAGAAATGGGCTCTCTGAGCAATTTCTGCAAGCAATGGTGGTG 1514

Qy 670 ATTTCAATAAATCGAATCCTTAATGCGAGATGCTCACTCAGAATGAGTGTGTCTGGG 729

Db 1513 ACGTCAACAACTGGGATCCAAATGCAGATCGTATGACCAAAATAGTGTGTGTGGG 1454

Qy 730 AGATCTTTTGGCCGAATAATGCGAGATGGTTTCAACCAATTCCTCCATGGTTCGAGTAA 789

Db 1453 AAAATTTTCTGCGCTAAACAATGCGAGATGGTACATCACCTAATTCCTCATGGATCTCGTAA 1394

Qy 790 AGATACGATGGATCTCCATCTGGCAACAAAGATTCTAATTCCTGCTGGATCAAGTTCT 849

Db 1393 AGGTGAAGATGGGATCTCCATCAGGGATAAAGGATTCAAATCCAGCTCGGATCAAGTACT 1334

Qy 850 CAGTTCAAGCACCAGGTGAATCTCCCATATAATGGCATATATCTATGATCTCTCCGAGGAGG 909

Db 1333 CAGTGCAGGCCCCCAGGAGAAATACCATATGATGGGATTTATTATGATCCTCTGAGAGG 1274

Qy 910 AGAAGTATGTTCAAAAATCTCAGCAAAAGAGACAAAATCACTTCGGATTTATGAGT 969

Db 1273 TAAAGTATGTGTTCAGGCATCGCACTAAACGACCAAAATCATTCGGATATATGAAA 1214

Qy 970 CGCAGGTTGGAATCAGTAGTACGAGCCAGTAAATTAACACATATGCCAATCTTAGAGATG 1029

Db 1213 CACATGCGGAATGAGTAGCCCGAACCGAAGATAAACACATATGTAACCTTTAGGAGATG 1154

Qy 1030 ATGTGCTTCTCGCATCAAAAAGCTTGGCTACAAATGCTGTTCAGCTCATGGCTATTCAAG 1089

Db 1153 AAGTCCTCCCAAGAAATAAAAACCTTGGATACAAATGCAGTGCATAATAATGGCAATCCAAG 1094

Qy 1090 AGAATTCATATATGCTAGTGTGGGTATCAGTCAAAAATCTTTTATGAGCTAGCAGGCC 1149

Db 1093 AGCACTCATATATGGAAGCTTTGGATACCATGTAACATAATTTTTTTCGCCCAAGTAGTC 1034

Qy 1150 GATTTCGAAGTCTCTGATGATTTTAAAGTCTCTAATAGATAAAGCTCACAGTTCAGTCTTC 1209

Db 1033 GTTTTGTACCCAGAAAGATTTGAAGTCTTTGATGATAGGCACATGAGCTTGGTTGC 974

Qy 1210 TTGTTCTCATGGATTTGTTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATA 1269

Db 973 TAGTTCTCATGGATGTGTTTCATAGTCAATGTCATGCTCAAGTAAATACTCTGATGGGTGAATG 914

Qy 1270 TGTGTTGATGGTACGGATGGTCACTACTTTCACCTCGAACACCGGGTTCATCATTTGGATG 1329

Db 913 GTTTTGTGTTACAGATACACATTTACTTTTCACAGTGGTCCACGTCGCCCATCAGTGGATGT 854

Qy 1330 GGGACTCTCGCTTTTCAAGCTATGGGAGCTGGGAGGTTCTAAGGTTTCTCTTTCAAATG 1389

Db 853 GGGATTTCTCGCTTATTTAACTATGGGAAGTTTGAAGTTTCTCTCTCCATG 794

Qy 1390 CAAGGTGGTGGTGGATGAGTACAAAGTTTGAATGGGTTTCAATTTGATGGGTTGACTTCAA 1449

Db 793 CTAGATGGTGGCTCGAGGAATAAAGTTTGAATGGTTCCTGTTTGTGGTGTGACCTCCA 734

Qy 1450 TGATGTACACCATCATGGAATGCAAGTATGATTTTACCGGCACTACAATGAATCTTTG 1509

Db 733 TGATGTACACTCACACCGGATTTACAAGTAAATTTACGGGGAACTTCAATGAGTATTTTG 674

Qy 1510 GATATGCAACTGATGTAGATGCTGTGTTTATTTGATGCTGTGTTGAATGATGATGTTCAATG 1569

Db 673 GCTTTGGCA CGATGTAGATGCAAGTGTGTTTACTTGATGCTGGTAAATGAICTAATTCATG 614

Qy 1570 GTCTCTTTCCAGAGGCTGTCAACATTTGGTGAAGATGTTAGTGAATGCCAACAGTTTGCA 1629

Db 613 GACTTTTCTCGAGGCTGTAAACCAATTTGGTGAAGATGTTAGTGAATGCCATACATTTGCC 554

Qy 1630 TTCCGGTTGAAGATGGTGGCTTTGCTGATTTATCGTCTCCACATGCTGCTCTGATG 1689

Db 553 TTCTGTTTCAGATGGTGGGTAGGTTTGTGACTATCGGATGTCATATGCTGTGCTGACA 494

```
QY 1690 AATGGGTTGAGATTATTTCAGAGAGAGATGAAGATTGAAAAATGGTGACATTGTACATA 1749
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
493 AATGATTGACCTTCTCAAGCAAGATGATGAACCTTGGAGATGGTGATTTGTGCACA 434
QY 1750 TCGTACCAACAGCGGTGGTGGAAAAAGTGTGTTCTTATGCTGAAAGTCATGACCAGG 1809
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
433 CACTGACAAATAGGAGTGGTTAGAGAAAGTGTAACTTATGCTGAAAGTCATGATCAAG 374
QY 1810 CCCTTGTGGTGACAAAACTATTGCAATTTTGGCTGATGGACAAGATATGATGACTTCA 1869
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
373 CATTAGTCGGCACAAGACTATTGGCTTTTGGTTGATGGACAAGGATATGATGATTTCA 314
QY 1870 TGGCTCTTTCAGACAGACCTACTCTCTCATAGATCGTGGAGTAGCAATTCGCAAAATGA 1929
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
313 TGGCCCTCGATAGACCTCACTCCTACCATTTGATCGTGGGATAGCATTTACATAGATGA 254
QY 1930 TCAGGCTTATTACATGGGATTAGCGGAGAAAGGATATTGAAATTTTATGGGAAATGAAT 1989
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
253 TTAGACTTATCAATGGGTTTAGGAGGAGAGGGCTATCTTAATTTTCATGGGAAATGAGT 194
QY 1990 TTGGACACCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCAGTGGTAAAT 2049
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
193 TTGGACATCCTGAATGGATAGATTTTCCAAGAGGTCCGCAAGACTTCCCAAGTGGTAAAT 134
QY 2050 TTGTTCTCGGGAACAAATTACAGTTATGATAAATGCGCGGTAGTGTGATCTAGGCAATT 2109
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
133 TTATTCAGGGAATAACAACAGTTATGACAAATGTCGTCGAAGATTTGACCTGGGTGATG 74
QY 2110 CAAAGCATCTGATATCATGAAATGCAAGATTTGATCAAGCAATTCAGCATCTTTGAAG 2169
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
73 CAGACTATCTTAGTATCATGTTGATGCAAGAGTTTGTATCAGGCAATGCAACATCTTTGAGC 14
QY 2170 AAGCTATGTTT 2182
Db || ||||| ||
13 AAAAATATGAATT 1
```

RESULT 10
US-09-087-277-3
; Sequence 3, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/09/087, 277B
; CURRENT FILING DATE: 1998-05-29
; EARLIER APPLICATION NUMBER: PCT/SE96/01558
; EARLIER FILING DATE: 1996-11-28
; EARLIER APPLICATION NUMBER: SE 9504272-7
; EARLIER FILING DATE: 1995-11-29
; EARLIER APPLICATION NUMBER: SE 9601506-0
; EARLIER FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 1393
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:beII gene fragment
; OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
; OTHER INFORMATION: (potato)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (2)..(1393)
; FEATURE:
; NAME/KEY: misc_feature

```
; LOCATION: (424)..(1150)  
; OTHER INFORMATION: Nucleotides 424, 891 and 1150 are n wherein n = A,  
; OTHER INFORMATION: C, G or T.  
; FEATURE:  
; NAME/KEY: misc_feature  
; LOCATION: (422)..(424)  
; OTHER INFORMATION: Amino acid 141 is Xaa wherein Xaa = Thr.  
; FEATURE:  
; NAME/KEY: misc_feature  
; LOCATION: (890)..(892)  
; OTHER INFORMATION: Amino acid 297 is Xaa wherein Xaa = Tyr, Ser, Cys  
; OTHER INFORMATION: Or Phe.  
; FEATURE:  
; NAME/KEY: misc_feature  
; LOCATION: (1148)..(1150)  
; OTHER INFORMATION: Amino acid 383 is Xaa wherein Xaa = Pro.  
US-09-087-277-3  
Query Match 36.6%; Score 947.4; DB 3; Length 1393;  
Best Local Similarity 79.9%; Pred. No. 1.7e-298;  
Matches 1113; Conservative 0; Mismatches 280; Indels 0; Gaps 0;  
QY 737 TTTGCCGAATTAATGCAGATGGTTCCACCACCAATTTCCCATCGTTCCTCGAGTAAAGATACG 796  
Db 1 TCTGCCAAATTAATGGATGGTTCTCTCGCAATTTCTCATGGTCCAGAGTGAAGATACG 60  
QY 797 CATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTTGGATCAAGTTCTCAAGTTCA 856  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
61 TATGGACACTCCATCAGTGTTAAGATTCCATTCCTGCTTTGGATCAACTACTCTTTTACA 120  
QY 857 AGCACCGAGTGAACCTCCCATATAATATGGCATATCTATGATCCTCCGAGGAGGAGAGTA 916  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
121 GCTTCTGATGAAATTCATATATGAATATATATGATCCACCCGAAGAGGAGGTA 180  
QY 917 TGTGTTCAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGATGCCAGT 976  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
181 TATCTTCCACACCCCGCCAAAGTCCGTGAGATATATGATATCTCATAT 240  
QY 977 TGGATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATGATGCT 1036  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
241 TGGATGAGTAGTCCGGAGCCATAAATTAATCACTCATCGTGAATTTTAGAGATGAATGTTCT 300  
QY 1037 TCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTTCACTCATGCTATGCTATTCAGAGCATTC 1096  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
301 TCCTCGCATCAAAAAGCTTGGGTACAATGGGTGCAAAATTTATGCTATTTCAAGAGCATTC 360  
QY 1097 ATATTATGCTAGTTTTGGGTATCAGTCAAAAATTTTATGCTAGCTAGCAGCCGATTTGG 1156  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
361 TTATTATGCTAGTTTTGGTTATCATGTCAAAAATTTTTTTNGCACCAGCAGCCGTTTTGA 420  
QY 1157 AACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTCTTGTGTTCT 1216  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
421 AACNCCGACGACCTTAAGTCTTTGATGATGAAGCTCATGAGCTAGGAATTTGTTGTTCT 480  
QY 1217 CATGGATATTGTTTCATAGCCATGCATCAACTAATACGTTGGATGGCTGGAATATGTTTGA 1276  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
481 CATGGACATTGTTTCAAGCCATGCATCAAAATTAATCTTTAGATGACTGAACATGTTTGA 540  
QY 1277 TGGTACGAGTGCATCTACTTTTCACTCTGGACACAGGGGTGCATCTATGGATGTGGGACTC 1336  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
541 CGGCACAGATAGTTGTTTACTCTCTCGGAGCTCGTGGTTATCATTTGGATGTGGGATTC 600  
QY 1337 TCGCCTTTTCAACTATGGAGCTGGAGGTTCTAAGGTTTCTTTTCAAAATGCAAGGTG 1396  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
601 CCGCCTCTTTTAACATATGGAAACTCGGAGGTACTTTAGGTATCTTCTCTCAAAATGCGAGATG 660  
QY 1397 GTGGTTGAGTACAGTAAAGTTTGTAGTGGTTTCAGATTTTATGGGGTGACTTCAATGATGTA 1456  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
661 GTGGTTGAGTACAGTCAAAATTTTGTAGTGGATTTAGATTTGATGTTGATCATCAATGATGTA 720  
QY 1457 CACCCATCATGGATTCAGGTAGATTTTACCGGCAACTACAAATGAAATCTTTGGATATGC 1516  
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
721 TACTCACCCAGGATATCGGTGGGATTTCACTGGGAACTACGAGGAATACTTTTGGACTCGC 780
```

```
Qy 1517 AACTGATAGATGCTGTGGTTTATTTCATGCTGTGTGAATGATATGATTCATGCTCTCTT 1516
Db 781 AACTGATGATGCTGTGTGTATCTGATGCTGTGCAACGATCTTATTCATGGCTTTT 840
Qy 1577 CCCAGAGCTGTACCAATGTGTGAAGATGTTAGTGGAAATGCAACAGTTTCGATTCGGGT 1636
Db 841 CCCAGATGCAATTACCAATGTGTGAAGATGTTAGTGGAAATGCGACATTTTNTATCCCGT 900
Qy 1637 TGAAGATGGTGTGTGCTTTGATATATCGTCTCCACATGGCTGTGTCTGATGAATGGGT 1696
Db 901 TCAAGATGGGCTGTGTGCTTTGACTATCGCTGCAATGCAATGCTGATAAATGGAT 960
Qy 1697 TGAGATTTTACAGAGAGATGAGATGGAATGGTGAATGGTGCACATGCTACATATGCTGAC 1756
Db 961 TGAGTTGCTCAAGAAACGGGATGAGATGAGAGATGGGTGATATGTTTCATACACGTAC 1020
Qy 1757 CAACAGGCGGTGGTTGGAAAGTGTGTTCTTATGCTGAAAGTCAATGACACAGGCGCTGT 1816
Db 1021 AAATAGAAGATGTCGGAAGATGTGTTTCATACGCTGAAGTCAATGATCAAGCTTAGT 1080
Qy 1817 TGGTGACAAAATATGCAATTTGGCTGATGGACAAAGATATGATGACTTCATGGCTCT 1876
Db 1081 CGGTGATAAATATAGCAATTCGCTGATGGACAAAGATATGATGATTTTATGGCTCT 1140
Qy 1877 TGACAGACCATCTACTCTCTCATAGATCGTGGAGTAGCATTCACAAAATGATCAGGCT 1936
Db 1141 GGATAGACNCAACATCATTAATAGATCGTGGAGTAGCATTCACAAAGATGATAGGCT 1200
Qy 1937 TATTACCATGGATTTAGCGGAGAGGATATTTGAAATTTTATGGGAATGAAATTTGGACA 1996
Db 1201 TGTAATATGGATTTAGGAGGAGGATGCTTAAATTTTCATGGGAATGAAATTTGGCCA 1260
Qy 1997 CCCCAGTGGATATGATTTTCCAGAGTGTATCATCTCCAGTGGTAAATTTGTTCC 2056
Db 1261 CCTCAGTGGATATGATTTTCCCTAGGCTGAAACACACCTCTCTGATGCTCAGTAAATTC 1320
Qy 2057 TGGGACAAATACAGTATGATTAATCGCGGTAGGTTTCATCTAGGCAATTCAGGCA 2116
Db 1321 CGGAACCAATTCAGTATGATTAATGAGACGGAGATTTGACCTGGGAGATGAGATA 1380
Qy 2117 TCTGAGATATCAT 2129
Db 1381 TTTAAGATACCTG 1393
```

RESULT 11

US-09-658-499-3

Sequence 3, Application US/09658499

Patent No. 6469231

GENERAL INFORMATION:

APPLICANT: EK, Bo

APPLICANT: KHOSNOODI, Jamshid

APPLICANT: LARSSON, Clas-Tomas

APPLICANT: LARSSON, Hakan

APPLICANT: RASK, Lars

TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO

FILE REFERENCE: 003300-486

CURRENT APPLICATION NUMBER: US/09/658,499

CURRENT FILING DATE: 2000-09-08

PRIOR APPLICATION NUMBER: 09/087,277

PRIOR FILING DATE: 1998-05-29

PRIOR APPLICATION NUMBER: PCT/SE96/01558

PRIOR FILING DATE: 1996-11-28

PRIOR APPLICATION NUMBER: SE 9504272-7

PRIOR FILING DATE: 1995-11-29

PRIOR APPLICATION NUMBER: SE 9601506-0

NUMBER OF SEQ ID NOS: 4

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 3

LENGTH: 1393

TYPE: DNA

```
ORGANISM: Unknown
FEATURE:
OTHER INFORMATION: Description of Unknown Organism: bell gene fragment
OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
NAME/KEY: CDS
LOCATION: (2)..(1393)
NAME/KEY: misc feature
LOCATION: (424)..(1150)
OTHER INFORMATION: Nucleotides 424, 891 and 1150 are n wherein n = A,
OTHER INFORMATION: C, G or T.
NAME/KEY: misc feature
LOCATION: (422)..(424)
OTHER INFORMATION: Amino acid 141 is Xaa wherein Xaa = Thr.
NAME/KEY: misc feature
LOCATION: (890)..(892)
OTHER INFORMATION: Amino acid 297 is Xaa wherein Xaa = Tyr, Ser, Cys
OTHER INFORMATION: or Phe.
NAME/KEY: misc feature
LOCATION: (1148)..(1150)
OTHER INFORMATION: Amino acid 383 is Xaa wherein Xaa = Pro.
US-09-658-499-3
```

Query Match 36.6%; Score 947.4; DB 4; Length 1393;

Best Local Similarity 79.9%; Pred. No. 1.7e-298;

Matches 1113; Conservative 0; Mismatches 280; Indels 0; Gaps 0;

```
Qy 737 TTGCGCAATAATGCAGATGTTCCACCACCAATCCCATGGTCTCGAGTAAAGATACG 796
Db 1 TCTGCCAAATAATGTGATGGTTCTCTCGCAATTCCTCATGGGTCGAGTGAAGATACG 60
Qy 797 CATGGATACCTCCATCTCGCAACAAAGATTCATTCTCGCTTGGATCAAGTTCTCAGTTCA 856
Db 61 TATGGACATCTCCATCAGTGTAAAGATTCATCTCGCTTGGATCAACTACTCTTTACA 120
Qy 857 AGCACCAAGTGAATCCCATATATAATGGCATATATGATGATCTCTCCGAGGAGGAAGTA 916
Db 121 GCTTCCTGATGAAATTCATATATGAAATATATGATGATCCACCCGAGGAGAGGTA 180
Qy 917 TGTGTTCAAAAATCTCAGCAAAAGAGACCAAAATCACTTCGGATTTATGATGCGACGT 976
Db 181 TATCTTCCAAACCCACCGCCCAAGAAACCAAAAGTCGCTGAGAATATATGAATCTCATAT 240
Qy 977 TGGAAATGAGTAGTACGAGGAGGAGTAAATTAACACATATGCCAACTTTAGAGATGATGCT 1036
Db 241 TGGAAATGAGTAGTCCGAGGAGGCTAAATTAATCACTAGTGAATTTAGAGATGAGTTCT 300
Qy 1037 TCCTCGCATCAAAAAGCTTGGCTTACAAATGCTGTGTTCAGTCTCATGGCTATTCAAGAGCATTC 1096
Db 301 TCCTCGCATAAAAAAGCTTGGGTACAAATGCGGTGCAAAATATATGGCTATTCAAGAGCATTC 360
Qy 1097 ATATTATGCTAGTTTGGGTATCACGTCACAACTTTTATGACGCTAGCAGCCGATTTGG 1156
Db 361 TTATTATGCTAGTTTGGGTATCATGTCACAAATTTTGTNGCACCAAGCAGCCGCTTTGA 420
Qy 1157 AACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACAGTATAGTCTTCTTGTCTCT 1216
Db 421 AACNCCGACGACCTTAAGTCTTTGATGATAAAGCTCATGAGCTAGGAATTTGTTCTCT 480
Qy 1217 CATGGATATTTGTTTCATAGCCATGCATCAATATACGTTGGATGGGCTGAATATGTTTGA 1276
Db 481 CATGGATATTTGTTTCACAGCCATGCATCAAAATATATCTTTAGATGCACTGAACATGTTGA 540
Qy 1277 TGGTACGGATGGTCACTACTTTCATCTGACCAACCGGGTCACTCATTTGGATGTCGGACTC 1336
Db 541 CGGCACAGATAGTTGTTTACTTTTCACTCTGGAGCTCGGGTATCATTTGGATGTCGGACTC 600
Qy 1337 TCGCTTTTCAACTATCGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAATGCAAGGTG 1396
Db 601 CCGCTCTTTAATCTATGGAACCTGGAGGTACTTAGGTATCTCTCTCAATGCGAGATG 660
Qy 1397 GTGTTTGGATGATGATCAAGTTTGTGAGGTTTCAGATTTGATGGGTGACTTCAATGATGTA 1456
```

Db 661 GTGGTTGGATGATTTCAAAATTTGATGGATTTAGATTTTGCATGGTGTGACATCAATGATGTA 720
QY 1457 CACCCATCATGATTCAGGTTAGATTTTACCGGCAACTACAAATGAATACCTTTGGATATGC 1516
Db 721 TACTCACACGATTTATCGGTGGGATTCACCTGGGAACCTACGAGGAATACTTTGACTGCG 780
QY 1517 AACTGATGTAGATGCTGTGGTTTATTTGATGCTGTGTAATGATATGATTCATGCTCTT 1576
Db 781 AACTGATGTAGATGCTGTGGTTTATTTGATGCTGTGTAATGATATGATTCATGCTCTT 840
QY 1577 CCCAGAGCTGTACCAATTTGGTGAAGATTTAGTGGAAATGCAACAGTTTGCATTCGGT 1636
Db 841 CCCAGATGCAATTTACCAATTTGGTGAAGATTTAGCGGAATGCGACATTTTATTTCCCGT 900
QY 1637 TGAAGATGCTGTGGTTTGGATTTATGCTCTCCACATGGCTGTGCTGATTAATGGGT 1696
Db 901 TCAGATGGGGTGTGGCTTTGACTATCGGCTGCATATGGCAATTTGCTGATTAATGGAT 960
QY 1697 TGAGATTTATCAGAGAGAGATGAAGATTTGGAATAATGGGTGACATTTGATACATATGCTGAC 1756
Db 961 TGAGTTGCTCAAGAAACCGGATGAGATTTGGAGAGTGGGTGATATTTGTTTCACTACAC 1020
QY 1757 CAACAGCGGTGGTGGAAAGTGTGTTCTTATGCTGAAAGTCATGACCGAGCCCTGT 1816
Db 1021 AAATAGAGATGGTCCGAAAGTGTGTTTCAATACGCTGAAAGTCATGATCAAGCTCTAGT 1080
QY 1817 TGGTGACAAAATTTATGCAATTTGGCTGATGGACAAAGATATGATGACTTTCATGGCTCT 1876
Db 1081 CGGTGATTAACATATAGCATTTCTGCTGATGGCAAGGATATGATGATTTTATGGCTCT 1140
QY 1877 TGACAGACCATCTACTCTCTCATAGATCGTGGAGTAGCATTTGCAACAAAATGATCAGGCT 1936
Db 1141 GGATAGACCTCAACATCATTAATAGATCGTGGGATAGCATTTGCAACAGATGATTAGGCT 1200
QY 1937 TATTAACATGGATTTAGCGGAGAGGATATTTGAAATTTATGGAATATGGAATTTGGACA 1996
Db 1201 TGTAACTATGGATTTAGGAGGAGAGGGTACCTAAATTTTCATGGGAATGAATTCGGCCA 1260
QY 1997 CCCCAGTGGATTTGATTTTCCAAAGGTGATCTACATCTCCAGTGGTAAATTTGTTCC 2056
Db 1261 CCTGAGTGGATTTGATTTCCCTAGGGCTGAAACACCTCTCTGATGGCTCAGTAATTC 1320
QY 2057 TGGGAACAATTACAGTTATGATAAATGCCGGCTAGGTTGATCTAGGCAATTCAAAGCA 2116
Db 1321 CGGAACCAATTCAGTTATGATAAATGCAGCGGAGATTTGACCTGGGAGATGCAGAATA 1380
QY 2117 TCTGAGATATCAT 2129
Db 1381 TTTAAGATACCGT 1393

RESULT 12

US-09-731-166-13
; Sequence 13, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
; APPLICANT: Sewalt, Vincent J. H.
; APPLICANT: Singletary, George W.
; TITLE OF INVENTION: Production of Modified Polysaccharides
; FILE REFERENCE: 35718/206348
; CURRENT APPLICATION NUMBER: US/09/731,166
; CURRENT FILING DATE: 2000-12-06
; PRIOR APPLICATION NUMBER: 60/169,993
; PRIOR FILING DATE: 1999-12-06
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 2470
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)

; OTHER INFORMATION: SBFI -- Genbank Accession No. 6639126 217959
; NAME/KEY: CDS
; LOCATION: (2)...(2470)
US-09-731-166-13

Query Match 24.5%; Score 633.4; DB 4; Length 2470;
Best Local Similarity 59.9%; Pred. No. 8.3e-196;
Matches 1179; Conservative 0; Mismatches 736; Indels 54; Gaps 5;

QY 456 ATATATGACATAGATCCAAAGCTTCACAGGCTTCGTCACACCTAGATTACCGGTATTCA 515
Db 251 ATATACGACCTGGACCCCAAGCTGGAGATATTCAGGACCAATTCAGGTACCGGATGAAA 310
QY 516 CAGTACAAAAGACTCCGAGAGAAATTCACAAGTATGAAGGTAGTCTGGATGCAATTTCT 575
Db 311 AGATTCTTAGAGCAGAAAGGATCAATTTGAAGAAATGAGGGAAGCTCTTGAATCTTTCT 370
QY 576 CGTGGCTATGAAAAGTTTGGTTCTCAGCGCTGCAATTCGAGATTTCAATACTGGAATCCCTAA 635
Db 371 AAAGGCTATTTGAAATTTGGGATTTAATCAAAATGAGGATGGAATGTATATCGTGAATGG 430
QY 636 GCACGAGAGCTACGTGGGCTGCATTCGATGGAGATTTCAATACTGGAATCCCTAAATGCA 695
Db 431 GCACCTCTCGCGAGGAGCAGACTTATTTGCTGACTTCAATGACTGGAATGGTGCAGAAC 490
QY 696 GATGTCATGACTCAGAAATGAGTGTGTCTGGGAGATCTTTTTCGCGAATAAATGCGAGAT 755
Db 491 CATAAGATGAGAGGATAAAATTTGGTGTTCGATCAAAAT--TGACCATGTCAAA 547
QY 756 GGTTCACCAACAATTCCTCCATGGTTCTCGAGTAAAGATACGATGGATCTCCATCTGGC 815
Db 548 GGGAAACCTGCTCATCCCTCAAAATTCGAAGTTAAATTTTCGCTTTTACATGTTGGAGTA 607
QY 816 AACAAAGATTTCTATTCCTGCTTGGATCAAGTCTC-----AGTTCAAGCACCAAGTGAA 869
Db 608 TGGGTTGATCGTATTCAGCAATTCGATTCGATTCGAGCTGTGTGAGCTCTAAATTTTGA 667
QY 870 CTCCCATATATAGTCATATATGATCTCTCCCGAGGAGGAGATGTTGTTTCAAAAT 929
Db 668 GCTCCCTATGATGGTTCATTTGGATCTCTCTCTTCTGAAAGTACACATTTAAGCAT 727
QY 930 CTTGAGCAAGAGACCAAAATCACTTCGGAATTTATGAGTGGACGCTTTGGAATGAGTAGT 989
Db 728 CTTGAGCTTCAAAAGCTGCTGCTCCACGATCTATGAAAGCCCATGTAGGTATGAGTGGT 787
QY 990 ACGGAGCCAGTAAATTAACATATGCCAATCTTAGAGATGATGCTTCTTCGATCAAA 1049
Db 788 GAAAGCCAGCATTAACACATATAGGGAATTTGCAGCAATGTGTTGCCACGATACGA 847
QY 1050 AAGCTTGGCTACATGCTGTTCAGCTCATGGCTATTCAGAGCAATTCATATTCGTAGT 1109
Db 848 GCAATAAATACACACAGTTCACTGATGGCAGTTATGGAGCATTCGTACTACTCTCT 907
QY 1110 TTTGGGTATCAGTCAAACTTTTATGAGCTAGACGCGATTTGGAACTCTCTGATGAT 1169
Db 908 TTTGGGTATCAGTCAAACTTTTATGAGCTAGACGCGATTTGGAACTCTCTGATGAT 967
QY 1170 TTAAGTCTCTAATAGATAAAGCTCAGAGTTAGTCTCTTTGTTCTCATGATATTTGTT 1229
Db 968 CTCAATATATCTTGTGTAGTAAGGCACACAGTTTGGGTTTGGAGTTCTGATGGATTTGTC 1027
QY 1230 CATAGCCATGCATCAACTAATACCTTGGATGGGCTGAATATGTTTGTATG-----GT 1280
Db 1028 CATAGCCATGCAGTAATATGTCACAGATGGTTTAAATGGCTATGATGTTGGACAAAGC 1087
QY 1281 ACGGATGGTCACTACTTTTCACTCTGGACACGCGGCTCATCATTTGGATGTTGGACTCTGC 1340
Db 1088 ACCAAGAGTCTATTTTTCATTCGCGGAGATAGAGGTTTATCATAACTTTGGGATAGTCGG 1147
QY 1341 CTTTTCAACTATGGAGCTGGAGTTCTAAGGTTTCTTCTTCAATGCAAGGTGGTGG 1400
Db 1148 CTGTTCAACTATGCTAACTGGGAGGATTAAGGTTTCTTCTTCTTAACTGAGATATTTGG 1207

:	TELEFAX:	302-773-0164
:	INFORMATION FOR SEQ ID NO:	24:
:	SEQUENCE CHARACTERISTICS:	
:	LENGTH:	2565 base pairs
:	TYPE:	nucleic acid
:	STRANDEDNESS:	single
:	TOPOLOGY:	linear
:	MOLECULE TYPE:	CDNA
:	US -09-257-894-24	

Query Match	24.5%;	Score 633.4;	DB 4;	Length 2565;
Best Local Similarity	59.9%;	Pred. No. 8.5e-196;		
Matches 1179;	Conservative 0;	Mismatches 736;	Indels 54;	Gaps 5;

Qy	456	ATATATGACATAGATCCAAAGCTTGACAGGCTTCCTCGTCAACACCTAGATTACCGGTATTCA	515
Dd	253	ATATAGACCTGGACCCCAAGCTGGAGATATTCAAGGACCATTTTCAGGTACCCGATGAAA	312
Qy	516	CAGTACAAAAGACTCCGAGAAGAAATTCACAAGTATGAAGTATCAAGTACTCTGGATGCATTTTCT	575
Dd	313	AGATTCTTAGAGCAGAAAGGATCAAATTGAAGAAATGAGGAAGTCTTGAACTTTTTTCT	372
Qy	576	CGTGGCTATGAAAAAGTTTGGTTTCTCACGCAGTGAACACAGGAATAACTTATAGAGAGTGG	635
Dd	373	AAGGCTATTTTGAAATTTGGGATTAATACAAATGAGGATGGAACGTGTATATCGTGAATGG	432
Qy	636	GCACGAGGACTAGTGGCTGTCATTCATTTGGAGATTTCAATACTCGAATCCTTAATGCA	695
Dd	433	GCACCTCTGCGCAGGAGGACAGACTTATTGGTGACTTCAATGACTGGAATGGTGCAAAC	492
Qy	696	GATGTCATGACTCAGAATGAGTGTGTCTGGAGATCTTTTTGCCGAATAATAGCAGAT	755
Dd	493	CATAAGATGGAAGGATAAAATTTGGTGTGTGGTCGATCAAAAT--TGACCAATGTCAA	549
Qy	756	GGTTACACCAATTTCCCATGGTTCTCGAGTAAAGATACGCATGGATATCTCAATCTGGC	815
Dd	550	GGGAAACCTGCATCCCTCAAAATCCAAGGTTAAATTTCCGCTTCTACATGGTGGAGTA	609
Qy	816	AACAAAGATTCTATTTCTCTGCTTGATCAAAAGTTCTCT-----AGTTCAAGCACCAAGGTGAA	869
Dd	610	TGGGTTGATCGTATTCAGCATTTGATTCGTTATGCGACTGTTGATGCTCTAAATTTGGA	669
Qy	870	CTCCCCATAATGGCATATACTATGATCTCCCGAGGAGGAGAGTATGTGTTCAAAAAT	929
Dd	670	GCTCCCTATGATGTGTTCATTGGGATCTCTCTGCTCTGAAAAGGTACACATTTTAAGCAT	729
Qy	930	CCTCAGCCAAAGAGACCAAATCACTTCGGATTTATGAGTCGCACGTTGGAAATGAGTAGT	989
Dd	730	CCTCGGGCTTCAAAGCCTGTGCTCCACGATCTATGAAGCCCAATGAGGTATGAGTGGT	789
Qy	990	ACGAGCGCAGTAA'TTAACATATGCCAACTTTTAGAGATGATGTGCTTCCTCGCATCAAA	1049
Dd	790	GAARAAGCCAGCAGTAAGCACATATAGGAA'TTTCAGACCAATGTTGCCACGCATACGA	849
Qy	1050	AAGCTTGGCTACAAATGCTGTTCACTCATGTGCTATTCAGAGCAATTCATATTATGCTAGT	1109
Dd	850	GCAAAATAACTATCAACACAGTTTCAGTTGATGTCAGTTATGGAGCAATTCGTACTATGCTTCT	909
Qy	1110	TTTCGGGTATCAGCTCACAAACTTTTATGTCAGTACGACCCGATTTGAACTCTCTGATGAT	1169
Dd	910	TTTCGGGTACCAATGTGACAAATTTCTTTGGGTTAGCAGCAGATCAGGCACACACAGAGAC	969
Qy	1170	TTAAAGTCTCTPAATAGATAAAGCTCAACAGTTAGGTCTTCTTTGTTCTCATGGATATTGTT	1229
Dd	970	CTCAAAATATCTTGTGTGATAGGCCACACAGTTTGGGTTTGGGTTCTCATGTGATGTTGTC	1029
Qy	1230	CATAGCCATGCATCAACTTAATACGTTGATGCGGCTGATATGTTTGTATG-----GT	1280
Dd	1030	CATAGCCATGCAGTAAATATGTCACAGATGGTTTAAATGCTATGATGTTGGCAAAAGC	1089
Qy	1281	ACGGATGGTCACTACTTTCACTCTGGACCACCGGGTCACTAATGGATGTGGGACTCTCGC	1340
Dd	1090	ACCCAAGATCCTATTTTTCATGCGGAGATAGAGGTTATCATAACTTTGGGATAGTCGG	1149

Qy	636	GCACAGGAGCTACGTCGGCTGCATTTGATTTGGAGATTTCAATTAACCTGGAACTCCTAATGCA	695
Db	431	GCACCTTCGTCGCGAGAGCGAGAGCTTATTTGGTGACTTCAATGAGTGGAAATGGTGCAAAC	490
Qy	696	GATGTCATGACTCAGAAATCAGATGTGTGTCTCGGGAGATCTTTTTCGGGAATTAATGCAGAT	755
Db	491	CATAAGATGGAGNAGATTAATTTTGGTGTTTGGTCGATCAAAAT---TGACCATGTCAAA	547
Qy	756	GGTTCAACCAAAATTCGCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGC	815
Db	548	GGGAAACCTGCCATCCTCACAATTCCAAAGTTAAATTTTCGCTTTCTACATGGTGAGTA	607
Qy	816	AACAAAGATCTATTCTCTGCTGGATCAAGTTCCTC-----AGTTCAAGCACCGAGTGAA	869
Db	608	TGGGTTTGATCGTATTTCCAGCATTTGATTCGTTATGCGACTGTTGATGCCCTCTAAATTTGGA	667
Qy	870	CTCCCATATAATGGCATATACTATGATCTCTCCGAGGAGGAGAAGTATGTGTTTCAAAAAT	929
Db	668	GCTCCCTATGATGGTGTTCATTGGGATCTCTCTGCTTCTGAAAGGTTACATTTAAGCAT	727
Qy	930	CCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGTCGACGCTTGGAAATGAGTAGT	989
Db	728	CCTCGSCCTTCAAAGCCTGCTGCTCCACGTATCTATGAAGCCCATGTAGTATGAGTGGT	787
Qy	990	ACGGAGCCAGTAAATTAACACATATGCCAATTTAGAGATGATGTGCTTCCTCGCATCAAA	1049
Db	788	GAAGAGCCAGCAGTAAAGACATATAGGGAATTTTGCAGACAATGTGTGCGACGCATACGA	847
Qy	1050	AAGCTTGGCTACAAATGCTGCTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGT	1109
Db	848	GCAATTAACATACAAACAGTTTCACTTGGATGGCAGTTTATCGAGCATTCGTTACTATGCTTCT	907
Qy	1110	TTTGGGTATCAGCTCAACAACTTTTATGCAGCTAGCAGCCGATTTTGGAACTCCTCGATGAT	1169
Db	908	TTGCGGTACCATGTGACAAATTTCTTTGCGTTAGCAGCAGATCAGGSCACACCAGAGGAC	967
Qy	1170	TTAAAGTCTCTAATAGATAAAGCTCAGAGTAGTAGTCTTCTTGTCTCTCATGTGATATTGTT	1229
Db	968	CTCAAAATATCTTGTGTATGAAGGCACACAGTTTGGGTTTTCGAGTTCTGATGGATGTGTC	1027
Qy	1230	CATAGCCATGCATCAACTAATACGTTGGATGGCTGAATATGTTTCATG-----GT	1280
Db	1028	CATAGCCATGCAAGTAATTAATGTCAAGATGGTTTAAATGGCTATGATTTGGACAAAGC	1087
Qy	1281	ACGGATGGTCACATCTTTCACCTCTGGACCAACGGGTCATCATTTGAGATGTGGGACTCTCGC	1340
Db	1088	ACCCAGAGTCCTATTTTCATCGGGAGATAGAGGTATCATAACTTTGGGATAGTCGG	1147
Qy	1341	CTTTTCAAATATGGGAGCTGGAGGTTCTTAAGGTTTCTTCTTCAAATGCAAGTGGTGG	1400
Db	1148	CTGTTCAAATATGCTAACTGGGAGGTATTTAAGGTTTCTTCTTCAAACCTCGAGATATTGG	1207
Qy	1401	TTGGATGAGTACAAATTTGATGGGTTTCAGATTTGATGGGTTGACTTCAATGATGTACACC	1460
Db	1208	TTGGATGAAATTCATGTTTATGGCTTCGATTTGATGGAGTTTACATCAATGCTGTATCAT	1267
Qy	1461	CATCATGGATTGCAGGTAGATTTTACCGGCAACTCAATGAATACATTTGGATATGCAACT	1520
Db	1268	CACCATGGTATCNAATGTGGGTTTACTGGAACCTACAGGAATATTTCAGTTTGGACACA	1327
Qy	1521	GATGTAGATGCTGTGGTTTATTTGATGCTGTGTAATGATATGATTCATGGTCTCTTCCCA	1580
Db	1328	GCTGTGGATGCAGTTGTTTACATGATGCTTGCNAACCAATTTAATGCACAAACTCTTTGCCA	1387
Qy	1581	GAGGCTGTCCACATTTGGTGAAGATGTTAGTGGNAATGCCAACAGTTTGCATTCCGGTTGAA	1640
Db	1388	GAAGCAACTGTGTTGTCTGAAAGATGTTTCAGGCAATGGCTATCCCTGATAGATGGATTGAC	1447
Qy	1641	GATGGTGGTGTGGCTTTTCATTATTCGTCCTCCACATGGCTGTGTGCTGATAAAATGGGTTGAG	1700
Db	1448	GAAGTGGGGTGGGTTTGACTATCCGCTGGCAATGGCTATCCCTGATAGATGGATTGAC	1507
Qy	1701	ATTATTTCAGAAGAGAGATGA---AGATTTGGAAAAATGGGTGACATTTGATATGCTGACC	1757

Db	1508	TACCTGAAGAAATAAAGATGACTCTGAGTGGTCGATGGGTGAATAGCGCATCTTTGACT	1567
Qy	1758	AACAGGCGGTGGTGGAAAAAGTGTGTTCTTATGTCTGAAAGTCATGACACAGGCGCCTTGTT	1817
Db	1568	AACAGGAGATATACTGAAAAATGCATCGCATATGCTGAGAGCCATGATGATCTATGTT	1627
Qy	1818	GGTGACAAAACTATGTGCATTTTGGCTGATGGACAAAGGATATGTATGACTTCATGGCTCTT	1877
Db	1628	GGCGACAAAACTATTGCAATTTCTCTGATGGACAAGGAAATGTACACTGGCAATGTCAGAC	1687
Qy	1878	GACAGACCATCTACTCTCTCATAGATCGTGGAGTAGCATTTGCACAAAATGATCAGGCTT	1937
Db	1688	TTGACGCTCTCTTCCACCTACAAATGATCGAGGAGATTGCATCTCCAAAAGATGATTCACCTC	1747
Qy	1938	ATTACCATGGGATTTAGGCGGAGAAGGATATTTGCAATTTTATGGAAATGAATTTGGACAC	1997
Db	1748	ATCACAATGCCCTTTGGAGTGATGGCTACTTGAAATTTTATGGAAATGATTTGGTCCAC	1807
Qy	1998	CCGAGTGGATATGATTTTCCAAGAGTGATCTACATCTTCCCAGTGGTAAATTTGTTCCT	2057
Db	1808	CCAGATGGATTGACTTTTCCAAGAGAA-----	1834
Qy	2058	GGGNACAAATTACAGTTATGATTAATCCGCGGTAGTGTTCATCTAGGCAATTCAAAGCAT	2117
Db	1835	GGGAACAACCTGGAGCTATGATTAATGCAGACGACAGTGGAGCCTTGTGGACACTGATCAC	1894
Qy	2118	CTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTAT	2177
Db	1895	TTGCGGTACAAGTACATGATGCGTTTGACCAAGCGATGAATGCGCTCGATGAGAGATTT	1954
Qy	2178	GGTTTCAATGACTCTCTGAGCACCAATAATATCAAGGAAGGATGAAAGGGATTCGGATCATTT	2237
Db	1955	TCCTTCCTTTTCGTCTCAAGACGAGATCGTCAGCGACATGAACGATGAGGAAAAAGTTATTT	2014
Qy	2238	GTCTTTCAGAGGGGAACCTCGTTTTGTGTAATCAATTTTCATTTGGACTAGCAGCTATTCG	2297
Db	2015	GTCTTTGAAACGTGGAGATTTAGTTTTGTGTTTTTCAATTTTCCATCCCAGAAAAACTTACGAG	2074
Qy	2298	GATTTACCGAGTTGGCTCTTAAAGCCAGGAAAGTACAAGATAGTCTTTGGATTTCAGATGAT	2357
Db	2075	GGCTACAAAGTGGATGCGGATTTGCCTGGGGAATACAGAGTAGCCCTGGACTCTGATGCT	2134
Qy	2358	CTTTGTGTTGGAGGCTTTGGCAGGCTTTAGTCATGATGCAGAGCACTTCA	2406
Db	2135	CTGGTCTTCGGTGGACATGGAAGAGATTGGCCACGACGTCGTGATCACTTCA	2183

Search completed: July 16, 2004, 19:54:58
Job time : 197 secs